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LONE-INSIDER BOARDS: IMPROVED MONITORING OR A RECIPE FOR DISASTER?

By

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ABSTRACT

The 1990s included a renewed emphasis on board independence. Allegedly, the greater the

proportion of independent outside directors, the more effective the board is at monitoring CEOs.

I assert in this dissertation that there are limits to board independence. Specifically, when a chief

executive officer (CEO) is the only inside board member, which I call a lone-insider board, a

critical source of information and mutual monitoring by other inside directors is lost. Increased

information asymmetry and loss of mutual monitoring gives CEOs more freedom to influence

organizational outcomes toward their personal preferences and in conflict with shareholders'

interests. Contrary to expectations, the study results indicate lone-insider boards are fulfilling

their fiduciary responsibilities in the area of executive compensation. However, lone-insider

boards need to limit CEO duality as well as encourage long-term strategies such as research and

development investment. This study also found that blockholders are somewhat detrimental in

lone-insider boards, because they increase total CEO compensation and compensation

differentials on the top management team. Duality is also more common when blockholders are

present. Finally, as lone-insider boards increase in size, they generally lose their effectiveness.

Duality is more common, and two of the three measures of executive compensation are greater.

CHAPTER 1
INTRODUCTION

A central purpose of the field of strategic management is to explain firm performance (Hoskisson, Hitt, Wan, & Yiu, 1999; Meyer, 1991; Rumelt, Schendel, & Teece, 1994). One important person who affects firm performance is the chief executive officer (CEO) (Finkelstein & Hambrick, 1996). CEOs are involved in the most important strategic decisions of the firm and have enormous influence on the strategic choices firms make (Child, 1972; Hambrick & Mason, 1984). For example, CEOs routinely propose significant financial decisions, such as increased research and development (R&D) investments, acquisitions, divestitures, and alliances. Further, they help set the overall vision for the firm and act as figureheads to influence the tone of corporate culture (Mintzberg, 1973). In addition to their internal duties, CEOs interact with numerous external stakeholders. Through these interactions, CEOs help craft the external image of the firm and thereby impact their firm's legitimacy in the greater environment (Meyer & Rowan, 1977).

Because CEOs are part of the firm's dominant coalition (Cyert & March, 1963) and possess substantial structural power (French & Raven, 1968; Mechanic, 1962), it is important to study them in relation to key organizational outcomes. Over the years, researchers have investigated several important research questions about the effects of CEO personal and/or structural characteristics on corporate governance, executive compensation, and strategy.

CEO characteristics that have been examined include power (Finkelstein, 1992; Ocasio, 1994), CEO ties to board members (Westphal, 1999), and founder status (Jayaraman, Khorana, Nelling, & Covin, 2000). Aspects of corporate governance receiving attention include board monitoring (Wright, Kroll, & Elenkov, 2002), duality (Boyd, 1995; Daily & Dalton, 1994), blockholding shareholders, takeover prevention, and entrenchment. Executive compensation is a specific part of governance structure that has received special attention. Firm performance and strategic outcomes such as diversification, acquisitions, and R&D spending (Amihud & Lev, 1981; Lane, Cannella, & Lubatkin, 1998) have been studied as both antecedents and outcomes of these CEO characteristics.

A common theoretical perspective utilized to study these various relationships is agency theory, which is one of the dominant theories in the field of strategic management (St. John,

2005). It is used to explain how governance mechanisms can stop agent (CEO) behaviors that diverge from the interests of principals (shareholders). According to agency theory, the separation of the firm's ownership from control creates a situation where CEOs have differing goals from shareholders (Berle & Means, 1932; Jensen & Meckling, 1976). Some fundamental assumptions of agency theory are that agents are self-interested, risk-averse, boundedly rational, and use their information advantage to their personal advantage (Eisenhardt, 1989). In strategic management, agency theory is commonly used to explain CEO behaviors, such as risk-averse actions. For example, a CEO might prefer a joint venture to an acquisition. This is because a joint venture does not require as much funding as an outright acquisition and therefore is less risky (Reuer & Ragozzino, 2006). Agency theory assumes CEOs are risk averse because they are unable to diversify their employment (Eisenhardt, 1989). Under weak governance, other behaviors might result including CEOs who appropriate excess compensation (Main, O'Reilly, & Wade, 1995), consume excess perquisites (Jensen & Meckling, 1976), or pursue strategies that are in conflict with shareholders' interests, such as reducing R&D investment in order to boost short-term accounting returns despite the risk to long-term growth (Hill & Snell, 1989).

The board of directors is one key mechanism for reducing such behaviors. Boards are legally required for publicly held firms, and are elected by shareholders to hire and fire CEOs, monitor CEO activities, and provide incentive compensation to align CEO and shareholder interests (Johnson, Daily, & Ellstrand, 1996; Walsh & Seward, 1990). A board is composed broadly of outsider and insider directors. Some outsider directors are affiliated with the firm, such as those who provide legal counsel (Johnson et al., 1996), whereas other outsiders are considered unaffiliated (Wade, O'Reilly, & Chandratat, 1990). Unaffiliated outsiders are expected to provide a more unbiased assessment of CEO performance than affiliated or insider directors because they do not have as much to lose if they are removed from the board. Also, outside board members need to maintain their reputation for independence if they wish to be invited onto other boards (Fama & Jensen, 1983). Insiders are less likely to challenge the CEO directly because they are at greater risk of being dismissed by the CEO (Johnson et al., 1996; Patton & Baker, 1987). Insider vulnerability is even more likely when they lack a powerful coalition because powerful CEOs are rarely challenged when they fire an employee (Combs, Ketchen, Perryman, & Donahue, 2007; Pitcher, Chreim, & Kisfavli, 2000). Generally, it is

assumed that boards composed mainly of outside unaffiliated directors are more independent, therefore the term board independence is used throughout to reflect this assumption.

Overall, evidence suggests outsiders can decrease certain agency-based problems. Boards that have a majority of outsider directors (i.e., independent boards) are more likely to increase the alignment of CEO compensation contracts with shareholder interests in periods of poor performance (Mishra & Nielsen, 1999). Following an acquisition, independent boards tie CEO compensation to acquisition-related returns to shareholders, whereas lax boards reward CEOs based on firm size (Wright et al., 2002). Also, equity-based incentive compensation is used more often when greater numbers of outsiders are on boards (Hamid, 1995). Financial restatements are more common with more outsiders on audit committees (Carcello & Neal, 2000). Finally, the probability of bankruptcy is lower with more unaffiliated outsiders on the board (Daily & Dalton, 1994).

Agency theory suggests that independent boards should also lead to better firm performance. However, empirical research is equivocal at best regarding whether the benefits of independent boards carry through to firm performance. One meta-analysis suggests a U-shaped relationship between board composition and performance, such that increases in insiders or outsiders are associated with higher firm performance but that heterogeneous boards are not as effective (Wagner, Stimpert, & Fubara, 1998). Another meta-analysis finds little relationship between independent boards and firm performance (Dalton, Daily, Ellstrand, & Johnson, 1998), and a third suggests a small positive effect (Rhoades, Rechner, & Sundaramurthy, 2000). Thus, evidence regarding the relationship between board composition and firm performance is equivocal at best.

Perhaps in part because of evidence that board independence decreases blatant conflicts of interest (e.g., CEO pay) and public outcry after a spate of high profile scandals in the U.S. (and despite the lack of evidence of a performance effect), increasingly, there has been more regulatory interest in board composition. For example, the United Kingdom's 1992 Cadbury Committee report suggested that a non-executive director chair, and at least a majority of non-executive directors compose the remuneration committee that decides executive pay (Conyon & Peck, 1998). In 1995, the United Kingdom's Greenbury Committee suggested remuneration committees be composed exclusively with outside directors (Conyon & Peck, 1998). In 1997, The Business Roundtable, which is a group of prominent U.S. CEOs, released a white paper on

corporate governance that suggested, "It is important for the board of a large, publicly owned corporation to have a substantial degree of independence from management" (The Business Roundtable, 1997: 10). Generally, it is assumed that a majority outsider board is more independent and thus provides a better check against self-interested CEO behaviors, which should benefit shareholders.

However, theory and empirical evidence suggests that insiders also have an important role on effective boards (Baysinger and Hoskisson, 1990). This is because insiders have a thorough understanding of the firm, which allows them to provide important strategic information to outsiders. Some empirical evidence supports the view that insiders have unique value on boards. For example, inside board members are linked to higher CEO turnover in organizations with deteriorating firm performance (Ocasio, 1994). Further, poison pill adoption and anti-takeover amendments are negatively related to the percentage of insiders (Johnson, Ellstrand, Dalton, & Dalton, 2004). Johnson and colleagues reconcile this counter-intuitive finding by referring to Fama and Jensen's (1983) suggestion that there might be a minimal number of useful insiders that circumvent the CEO and provide an important information conduit to outsiders (Johnson et al., 2004). Also, inside board members are positively related to R&D investments, which are long-term oriented (Baysinger, Kosnik, & Turk, 1991). Thus, there appears to be positive benefits associated with the presence of inside directors. Many firms have boards composed of all outsiders, except for the CEO. I refer to this phenomenon as lone-insider board structures because the CEO is the only inside board member. Because there are no other insiders serving on the board, this situation represents a possible absence of mutual monitoring. Joseph and Ocasio (2005) suggest that CEOs might be taking advantage of the emphasis on majority outsider boards. Instead of responding to the emphasis by ensuring boards have a simple majority of outsiders, they might take the step of replacing all insiders with outsiders under the guise of independence. CEOs could do this by convincing the board and shareholders to replace all insiders with outsiders.

Thus, although a majority of outside board members is expected to result in pro-shareholder outcomes and better firm performance, there may be limits to board independence. Specifically, when the CEO is the lone-insider and the remainder of the board consists of unaffiliated outsiders, the ability of the board to effectively monitor CEOs might suffer in two

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respects. These include a loss of mutual monitoring and increased information asymmetry between the CEO and other board members.

One reason increasing outsiders is not always associated with pro-shareholder outcomes might be because of the loss of mutual monitoring. Mutual monitoring takes place when top managers monitor the behaviors of each other, including the CEO. Top managers have an incentive to monitor the CEO because they want the firm to do well. If the firm does well, then the external labor market will attribute positive performance outcomes to management, making it more likely managers will find employment and good compensation in the external labor market (Fama, 1980). Also, some managers might have an opportunity to one day lead the firm. If they voice well-reasoned alternative views or key insights to external board members regarding complex decisions, they might gain board trust and the trust of other insiders. This trust could help make them leaders of a coalition of insiders that challenges the CEO and eventually leads to the coalition leader succeeding the CEO (Ocasio, 1994).

As firms move toward lone-insider boards, the effectiveness of mutual monitoring should decrease. Without other insiders on the board, there are fewer "eyes on the ground" to monitor the CEO. Although any top manager can monitor the CEO, inside board members have special access to outsider directors. This is because they interact directly with outsiders during periodic board meetings. Through these interactions, insiders and outsiders form professional relationships that over time should lead to increased trust between them (Gulati & Westphal, 1999).

Thus, if inside board members sense an issue with the CEO and report it to outsiders, outside board members are more likely to use this information because research suggests that groups are more able to use information when members are familiar with one another (Williams & O'Reilly, 1998). This is in contrast to concerns from non-board members, who do not have as frequent or rich interactions with outside board members. Also, such contact would be at extreme employment risk to the non-board member because they could be terminated with little notice by outside board members.

Increased information asymmetry between the CEO and board is another possible result from lone-insider structures. The CEO has intimate knowledge of the firm. Unaffiliated outsiders are only present for board meetings and have other jobs that take their time, and thus know much less about the firm than the CEO (Lorsch & MacIver, 1989). With no other inside board

members with whom to verify information or gain valuable insider perspectives on firm operations and strategy, it is more difficult for board members to gain the knowledge they need to effectively evaluate strategy. The result of this situation could be that boards, which are formed to oversee the CEO, do not have enough information to monitor effectively. Because of their information asymmetry disadvantage, they might be more likely to accept the CEO's self-interested judgments (Holmstrom, 1979).

The possible loss of mutual monitoring and information asymmetry with lone-insider boards could be a significant problem in corporate governance. If boards cannot rely on insiders to provide them with confirmation or disconfirmation, then they will be forced to rely solely on the CEO for their information. According to agency theory, CEOs are expected to behave in self-interested ways by maximizing their personal economic utility (Jensen & Murphy, 1990). Thus, they might use their information asymmetry advantage to maximize their income and job entrenchment, which "occurs when managers gain so much power that they are able to use the firm to further their own interests rather than the interests of shareholders" (Weisbach, 1988: 435).

In sum, there might be limits to the effectiveness of independent boards, which theoretically occurs with higher ratios of independent outside members (Dalton & Dalton, 2003). When boards move to lone-insider structures, mutual monitoring could decrease to the point where it is no longer effective and CEOs might exploit their information asymmetry advantage with the board. Absent other insiders, the information conduit from inside the firm to outsiders could be constrained. If outsiders miss out on important and rich information that insiders can provide, their decision-making capabilities might be hindered. Further, outsiders could be at a disadvantage because they will have to rely more on CEO claims; they do not have other insider board members to provide balanced perspectives. Thus, the loss of mutual monitoring and the widening of the information asymmetry divide between the CEO and board could hamper the board from performing their most important monitoring functions, such as designing compensation packages and ensuring that strategies are in shareholders' long-term interests.

In lone-insider structures, outsiders are not privy to as much critical information about the firm. Without this information, it is more difficult for outsiders to understand the implications of particular strategic options. Baysinger and Hoskisson (1990) suggest that because outside board members do not understand the intimate workings of the firm, they are more likely to emphasize

financial controls, such as accounting rates of return, over strategic controls that involve examining the quality of the CEO's decision making process or decision outcomes. Under the lone-insider board structure, it might be that boards lose almost all of their ability to evaluate strategy because they lack important information that insiders provide. CEOs would have a larger-than-normal information asymmetry advantage, which could lead to an almost exclusive emphasis on financial controls, such as making CEO pay dependent on firm financial outcomes. Additionally, it could be more difficult for outsiders to detect self-interested CEO behaviors because of the lack of insider contacts. At the extreme, this could lead to dire consequences. For example, CEOs might be more likely to commit fraud in order to achieve financial benchmarks (Zahra, Priem, & Rasheed, 2005), or they might insist on adopting anti-takeover strategies such as poison pills at the expense of shareholders in order to increase personal income and job entrenchment.

Because of the possible issues related to boards with lone-insider board structures, the primary research question this study attempts to answer is, "Do boards with lone-insider structures differ from other board structures in terms of organizational outcomes?" These outcomes include items in the domains of corporate governance, executive compensation, and firm strategy. For example, do CEOs of lone-insider structures gain duality more often than in other board structures? Do these structures pass more anti-takeover measures? Do lone-insider structures result in higher levels of CEO cash compensation, larger disparities between CEO compensation and that of the next highest paid officer, or significantly higher levels of incentive compensation? Also, do lone-insider structures have lower levels of R&D and higher diversification levels compared to other board structures? Specifically, do other factors influence the relationship between lone-insider structures and organizational outcomes? For example, what is the influence of institutional investors in lone-insider structures? What role does board size play in the outcomes described above?

Statement of the Problem

Understanding the effects of lone-insider boards on organizational outcomes is important in terms of theory and practice. There are two important theoretical reasons we need to understand the effects of extreme independence. The first is because we will better understand the boundaries of a central prediction of agency theory, which suggests that independent boards are better monitors of CEOs. Theory suggests board independence is good policy. However, it

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might be that there are limits to the effectiveness of board independence. Second, we will learn more about mutual monitoring. Currently, there is very limited research about mutual monitoring. Lone-insider structures should represent the case where mutual monitoring is least effective. Thus, understanding the effects of this situation will provide indirect evidence of whether or not mutual monitoring really matters in corporate governance.

From a practical standpoint, if CEOs are using the ruse of independence to increase their power and reduce the quality of oversight, there are numerous potential negative outcomes in the areas of corporate governance, executive compensation, and firm strategy. A CEO might be more likely to keep their job even in times of poor firm performance, as independent boards give the CEO more leeway to make progress. CEOs might gain duality under this board structure compared with other boards. Further, anti-takeover measures, such as poison pills, might be more likely in lone-insider structures. Total compensation, compensation compared to other top managers, and incentive compensation might all be higher under the lone-insider structure as CEOs take advantage of their information asymmetry advantage and lower mutual monitoring. Finally, CEOs of lone-insider structures might reduce R&D investments in order to achieve short-term accounting performance gains, or they could try to increase diversification in order to increase their compensation.

Potential Contributions

If the evidence suggests that lone-insider boards are associated with negative outcomes compared to other boards, all of these potential problems suggest implications for theory and practice. First, theory development will benefit, regarding mutual monitoring and positivist agency theory. We will more thoroughly understand the importance of mutual monitoring. Future research on boards will need to model the effects of lone-insider boards. Also, agency theory development will benefit. Agency theory recognizes conflicts occur in certain principal-agent relationships, then offers prescriptions to reduce conflicts (Eisenhardt, 1989). If the study results suggest there are limits to board independence effectiveness, agency theory development will benefit because lone-insider structures will not be viewed as an effective governance structure to reduce principal-agent conflicts.

The second contribution is the benefit to practice. Study results will lead to more precise prescriptions regarding board composition that will benefit shareholders. Increased independence might be too simplistic. Negative organizational outcomes associated with lone-insider boards,

such as over-diversification or reduced R&D investments that harms long-term organizational health, would suggest that some minimum level of insider representation is needed. Also, independent boards will need to be more vigilant, possibly reducing CEO power by limiting dual CEO-chairs. Insiders could help outsiders control the growth of CEO compensation packages. Finally, shareholders might want to take steps to ensure their interests are better protected, such as influencing legislation that is in their favor. Regulators will have evidence that will help them implement regulations requiring that boards have a minimum number of insiders.

In sum, this study is expected to inform both theory and practice by examining the differences between boards in firms with lone-insider structures and other board structures. This study takes a unique approach by exploring the possible loss of information resulting from situations where mutual monitoring is minimized. As such, these CEOs are privy to more inside information about the firm than any other board member and might be able to exploit this information advantage to their personal benefit. This information asymmetry could be associated with a variety of negative organizational outcomes.

This study proceeds in the following manner. Chapter 2 reviews the relevant literature on agency theory, to include mutual monitoring and information asymmetry. Hypotheses are developed in Chapter 3 that describe the possible negative outcomes of lone-insider boards in terms of corporate governance, executive compensation, and firm strategy that could arise for lone-insider boards. Following hypothesis development, the methodological approach to measuring independent and dependent variables is presented in Chapter 4. Analysis and statistical results are presented in Chapter 5, and Chapter 6 concludes with a discussion of study results, limitations, and directions for future inquiry.

CHAPTER 2
LITERATURE REVIEW

In the following chapter, I review the relevant theoretical literature as it pertains to this study. I highlight only the relevant areas of the vast amount of literature that uses agency theory. Specifically, I begin with the origins and classical assumptions of agency theory and the role of monitoring and incentives in aligning the interests of agents and principals. Central to this discussion is the role of internal control mechanisms, which are designed to monitor and incentivize CEO behaviors to be consistent with shareholder desires. I then discuss some predictions of CEO behavior when monitoring and incentives break down, specifically as they relate to corporate governance, executive compensation, and firm strategy. I share evidence supporting agency theory predictions, as well as evidence that is contrary to agency theory. I conclude with an appeal to investigate this study's research question.

Agency Theory – Origins

The roots of agency theory can be traced to Berle and Means (1932) who began a discussion about the separation of management and control. In the 1800s, corporations were typically small in size and controlled by a relatively small number of shareholders. These shareholders were generally located in close proximity to the corporations they owned, and were thus able to keep an eye on the routine business dealings and performance of the firm. Further, the top manager was typically a large, or the largest, shareholder and thus bore much of the costs of poor business decisions. However, the Industrial Revolution caused the rapid growth of smaller corporations into larger, more complex corporations owned by increasing numbers of geographically dispersed shareholders. These large numbers of geographically dispersed shareholders could not monitor the corporation efficiently. Consequently, the professional manager emerged to run day-to-day operations, resulting in a separation of ownership from control (Elson, 1995). This separation, according to Berle and Means (1932), produces conditions where the interests of the two parties diverge. This divergence of interests presents a challenge to neoclassical economic theory because it suggests that the widely-held corporation is inefficient relative to the entrepreneurial firm.

The Chicago School's emphasis on the efficiency of markets suggests there must be a reason for the growth of the widely-held corporation. Jensen and Meckling (1976) offered the

first explanation. They described three agency costs that result from the separation of ownership and control: (1) Shareholders must provide monitoring to align agent and shareholder interests, (2) agents incur bonding costs to reassure shareholders they will not deviate from investors' interests, and (3) there is residual loss due to remaining self-interested or misdirected agent behavior. In Jensen and Meckling's model, the corporation is efficient because as the 100% owner/manager begins to sell ownership shares to dispersed shareholders, the share price will fall to the point where all anticipated agency costs are factored in. The result is that the owner-turned-agent bears all agency costs and thus has a strong incentive to minimize them. However, as Mahoney (2005) points out and Jensen and Meckling (1976) acknowledge, sale of shares by a 100% owner is not typical. Most CEOs own few shares prior to assuming the post and thus could not bear full agency costs. Consequently, their model had questionable practical applicability.

Fama and Jensen (1983) offered an explanation for the efficiency of the widely-held corporation when the manager does not start as owner. They argued that the modern corporation is efficient because it separates decision management from decision control. Managers have the responsibility to generate initiatives for the board to consider. The board has the authority to accept or reject management initiatives. Therefore the board acts as a check against self-interested or misdirected management behavior. If initiatives are approved by the board, managers have the responsibility to implement their programs. At this point, the board continues management oversight by tracking progress toward meeting program objectives. According to Fama and Jensen, this separation of decision management from decision control is evidence of an efficient market because it allows investors to pool capital for projects that require large outlays at the lowest possible agency costs.

In addition to the board, other governance mechanisms also exist, including mutual monitoring, the external labor market, the market for corporate control, and blockholders that collectively reduce agency costs to the point where the advantages of dispersed ownership outweigh its costs. Otherwise, an alternative governance structure would be utilized in order to minimize agency costs.

Agency Theory – Assumptions, Predictions and Evidence

Because agency theory is grounded in neoclassical economics, one key assumption is that people act in economically utility-maximizing ways. As a result, agents might act in their own self-interest, rather than in the interests of their principals (Jensen & Meckling, 1976). As Jensen

and Murphy (1990: 226; emphasis in original) suggest, "The CEO compares only his *private* gain and cost from pursuing a particular activity." Given a set of alternatives, shareholders and managers will select the choice that maximizes utility with the least amount of effort (Jensen & Meckling, 1976).

Additional assumptions of agency theory are psychological and situational. From a psychological standpoint, agents are motivated by employment security and money, both current and future. Following this economic logic, agents are individualistic, viewing benefits in terms of personal economic gains. Contrary to principals who are risk-neutral because of their ability to diversify their investments (Eisenhardt, 1989; Teece, 1980, 1982), agents are risk-averse because their human capital is invested so heavily in their firm (Boyd, 1995). If agents are fired, they lose their economic security. This might cause agents to act more conservatively, by reducing high-risk long-term investments and through keeping strategic persistence (Grossman & Cannella, 2006). It might also cause them to diversify too much in order to protect themselves from unexpected downturns in some businesses (Amihud & Lev, 1981). Also, agents seek salary, benefits, and economically valuable perquisites because such compensation is guaranteed and relatively risk-free.

Unfortunately for shareholders, information asymmetry prevents them from always detecting self-interested agent behavior. In the case of the large widely-held corporation, shareholders are not privy to anything close to complete information regarding the quality of executive decision-making. Executive jobs are inherently non-programmable (Eisenhardt, 1989), making it difficult to observe whether the agent's efforts are shareholder focused. Information asymmetry creates two specific agency problems, adverse selection and moral hazard (Eisenhardt, 1989).

Adverse selection occurs when principals are not able to substantiate the claims a potential agent makes regarding their unique knowledge, skills, and abilities. Although a board has likely gone through a thorough evaluation process to identify potential CEO candidates, ambiguity remains concerning whether the candidate is a good fit for the firm. It is difficult for the board to know *a priori* whether a CEO candidate's prior success will translate into superior performance in the focal firm. Thus, the board might hire a CEO that is a poor fit for the firm, the result of which is sub-optimal firm performance.

Moral hazard is another agency problem faced by principals. Moral hazard is essentially misdirected behavior (Eisenhardt, 1989). Instead of engaging in performance-maximizing activities, the CEO might redirect scarce resources toward activities that enhance their self-interest. For example, the CEO might purchase a fleet of jets, purchase company condominiums in exotic locales, furnish lavish offices, or take interest-free personal loans. Perhaps more importantly, misdirected strategies can occur. Jensen (1986), for example, suggests that many acquisitions are the result of agents using excess cash flows on "wasteful attempts" to grow the firm. Growth through product diversification is one way to increase job entrenchment and compensation (Amihud & Lev, 1981; Tosi, Werner, Katz, & Gomez-Mejia, 2000). Another way to increase job entrenchment and help sustain income is to adopt anti-takeover initiatives, such as poison pills, or super-majority voting requirements (Walsh & Seward, 1990). To control the potential costs arising from adverse selection and moral hazard, control mechanisms are required to minimize misdirected behaviors (Eisenhardt, 1989).

Firms have a number of control mechanisms, both external and internal, that help limit misdirected CEO behavior. When these control mechanisms work, adverse selection and moral hazard are more likely held in check. When governance is not effective, the CEO can wield asymmetrical power to increase their compensation and job entrenchment. A powerful CEO might use their influence to increase fixed and total compensation (Mace, 1971). Also, they might try to avoid contracts that link their pay to firm performance, or get their pay tied to accounting measures that can be more easily manipulated (Healy, 1985). CEOs could also enhance their job or financial security by gaining duality (Finkelstein & Hambrick, 1996; Rechner & Dalton, 1991), manipulating financial reports (Kesner, Victor, & Lamont, 1986), resisting takeovers by adopting poison pills (Daily & Dalton, 1993), increasing diversification (Amihud & Lev, 1981), reducing R&D investments, and repricing of stock options (Pollock, Fischer, & Wade, 2002).

Governance Mechanisms

Control mechanisms can be either external or internal (Walsh & Seward, 1990). The key external control mechanisms are the external labor market, the market for corporate control, and blockholders. The key internal control mechanism is the board of directors, which hires and fires CEOs, sets executive compensation, and approves and monitors top management initiatives (Walsh & Seward, 1990). Boards also help make major business decisions and influence

corporate strategy (Clark, 1986). But, other top managers can also play an important role in monitoring the CEO through mutual monitoring (Fama & Jensen, 1983). Taken together, the external and internal control mechanisms should work together to protect shareholders.

External Labor Market

The first external control mechanism is the market for executive talent (Fama, 1980). The external labor market attributes firm performance partly to CEO behavior, so poor firm performance will lower managers' external labor market value. Gilson (1989) found that over 60% of CEOs left the firm when there was evidence of financial distress and that none he studied attained a similar position in subsequent employment. Similar results were documented by Houston and James (1993), who examined poor firm performance and CEO turnover in the banking industry. Just 1 of 39 former CEOs found similar positions. In a study examining the reemployment of managers from failed Texas banks, Cannella, Fraser, and Lee (1995) found managers from banks that closed for reasons beyond management's control were more likely to find subsequent employment than managers from banks that did not close for reasons beyond management's control. They also found managers from operationally efficient banks were likely to keep their jobs or find new employment. Thus, the external labor market appears to have the ability to discriminate somewhat between poor organizational performance and poor managerial performance.

Market for Corporate Control

If the external managerial labor market fails to align CEO and shareholder interests and firm performance suffers, then the market for corporate control may act as a substitute. The market for corporate control involves competition from other management groups to control resources (Fama, 1980). When top managers misdirect their efforts, firm performance suffers. Poor firm performance is reflected in stock prices. If the stock price is low relative to the potential value of assets under management's control, another management group might feel they can purchase the target firm for a low price, replace the current management team, and use their managerial expertise to increase value. If the target firm's shareholders feel an external tender offer is in their best interests, they can approve the sale and the new management team will take over. Thus, the threat of other management groups attempting to wrest control offers an incentive to keep firm value as high as possible. In a study of 253 tender-offer takeovers, Martin and McConnell (1991) found post-takeover turnover is over 40%, compared to just 10% during

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the five years prior to the acquisition. They also found that target firm managers are more likely to leave when their firms performed below the industry average prior to the acquisition. These results suggest there is a market for corporate control and that it acts in accordance with theoretical predictions by replacing managers in under-performing firms. Thus, managers have incentive to maximize shareholder value to avoid being replaced.

Blockholders

Berle and Means (1932) chronicled the separation of management from ownership as ownership dispersed among thousands of shareholders (Davis & Thompson, 1994). These relatively small investors were unorganized, and did not amount to much of a coalition that top managers and boards had to take into consideration. Over time however, single or large groups of organized investors called "blockholders" have gained political clout with top managers and the board. Blockholders are investors who hold substantial portfolios of stock in a firm and thus their concerns are frequently considered by top managers (Davis & Thompson, 1994).

Blockholders, also dubbed institutional investors, include public and private pension funds, mutual funds, as well as insurance companies and banks (Ryan & Schneider, 2002). Blockholders have substantial investments in the firm, and thus have more incentive than small investors to monitor the board and CEO (Shleifer & Vishny, 1997). If they are not happy with strategy or firm performance, they could divest their shares and invest elsewhere. However, selling large amounts of shares at once is not economical because the share price will drop when they are dumped on the market (Daily, Dalton, & Rajagopalan, 2003; Lane et al., 1998). Thus, it makes more economic sense to actively monitor and/or influence the board and CEO. Whereas individual investors with small equity stakes lack the incentive and resources to monitor top management, institutional investors with substantial stock ownership have strong incentives to monitor management (Shleifer & Vishny, 1986).

Institutional investors control more than 50 percent of stock in publicly traded corporations in the U.S. (Useem, 1993). Because of their substantial stock ownership, institutional investors can use their voting rights to influence the composition of the board of directors (Carleton, Nelson, & Weisbach, 1998) and to influence other governance issues, such as executive compensation (David, Kochhar, & Levitas, 1998). They can also approach management directly with concerns (Byrne, 1999). If management does not listen to institutional investor concerns then institutional investors can use their voting power. For example, one study

suggests blockholders are more active in voting on antitakeover amendments than non-blockholders, and are more likely to show resistance when amendments are contrary to shareholders' interests (Brickley, Lease, & Smith, 1988). Shareholder activism increased in the late 1980s. Anti-management shareholder resolutions increased nearly fourfold from 1987 to 1991 (Johnson et al., 1996). Other evidence on institutional investors suggests they are positively linked to increased management turnover (Kaplan & Minton, 1994) and executive compensation is more tightly controlled when such investors hold a board seat (Bertrand & Mullainathan, 2001). Further, compensation is more closely linked to firm performance when institutional investors are present (Gomez-Mejia, Tosi, & Hinkin, 1987), and firms with CEO-chairs are less likely to have options repriced when institutional investors own substantial levels of stock (Pollock et al., 2002). Overall, the evidence on blockholders suggests that these large investors are a powerful monitoring mechanism that act as a check against managerial self-interest.

If the external labor market, the market for corporate control, or blockholders do not act as a strong force to incentivize CEOs to make decisions consistent with shareholder interests, there are also internal governance mechanisms that exist to encourage CEOs to engage in pro-shareholder behaviors. These are the board of directors and mutual monitoring.

Board of Directors

The primary internal control mechanism is the board of directors. Fama (1980: 294) describes the board as "…the ultimate internal monitor…whose most important role is to scrutinize the highest decision-makers within the firm." Required by law for publicly-held firms, a board of directors is elected by shareholders to oversee the CEO (Johnson et al., 1996). Boards are composed of insiders and outsiders. Insiders are employees or former employees of the firm, or others who have very close ties (Judge & Zeithaml, 1992). Outsiders are not current employees of the firm, have never served on the top management team, and do not have relatives who are employed by the firm (Zahra & Pearce, 1989). Outsiders are further classified as either affiliated or unaffiliated directors. Affiliated directors have some kind of professional tie with the firm's managers, whereas unaffiliated directors have no such ties (Johnson et al., 1996). Unaffiliated outsiders should provide better monitoring than affiliated outsiders because they are not subject to business influences from management (Johnson et al., 1996). Consequently, the greater proportion of unaffiliated outsiders on the board, the more independent, and allegedly, the greater their monitoring ability.

Boards serve various functions in their service to shareholders. Board members meet periodically to provide advice and counsel to the CEO (Lorsch & MacIver, 1989), hire and fire CEOs, and adjust CEO compensation (Fama & Jensen, 1983). Advice and counsel might include reviewing and approving CEO proposals such as mergers and acquisitions, or changes to corporate strategy. Hiring and firing CEOs is a second important board function. In periods of poor firm performance, the board must first decide whether to attribute it to the CEO or to a situational factor (Walsh & Seward, 1990). If the board concludes the CEO is responsible for poor firm performance, the CEO could be fired. However, pinpointing poor performance squarely on the CEO is challenging due to an array of other possible environmental and situational influences (Hrebiniak & Joyce, 1985). If the CEO is fired, then the board undertakes a CEO search, narrows the field of candidates, and selects a new CEO. Finally, adjusting CEO compensation in a way that aligns CEO interests with shareholders is another board responsibility (Brickley, Bhagat, & Lease, 1985). Boards can adjust incentives in order to redirect the CEO toward shareholder-friendly actions (Walsh & Seward, 1990). In sum, boards provide advice and counsel, hire and fire CEOs, and adjust compensation.

Balanced Composition

The first factor influencing board effectiveness is board composition. An appropriate balance of unaffiliated outsiders and insiders should enable the board to fulfill its fiduciary responsibilities. Unaffiliated outsiders offer advantages because they are independent of the CEO, enabling them to monitor CEOs without fear of job loss. Also, they are exposed to substantial information through their boundary spanning roles, allowing them to gather important information that can be used to advise CEOs (Dalton & Kesner, 1985; Westphal & Zajac, 1995). But insiders are also important because they understand the business better than outsiders and should provide important input during deliberations (Bennett & Anthony, 2001). A proper balance of insiders and outsiders should result in improved strategy and firm performance because of insiders' firm-specific knowledge and outsiders' independent evaluations of top management.

There is some evidence that composition affects firm governance and strategy. Poison pills are a type of governance policy and is "a security issued to stockholders that gives them the right to buy shares in the firm at a deeply discounted rate if a raider passes an ownership threshold (typically 20 percent) without the approval of the board" (Davis & Thompson, 1994:

149). Poison pills can cause raiders to lose incentive to tender offers because they are excluded from these provisions. Poison pills reduce the effectiveness of the market for corporate control and thus give CEOs less incentive to act in shareholders' interests. One study suggests poison pill adoption is inversely related to the proportion of outside directors (Mallette & Fowler, 1992). However, when outsider majority boards do adopt poison pills, the stock market reacts positively, which suggests that poison pills can also be a way to protect shareholders from premature takeover (Brickley, Coles, & Terry, 1994). Overall, the evidence suggests that poison pills are damaging because they weaken the market for corporate control, unless implemented by an independent board.

When boards are weak, risk-averse CEOs might try to increase their job security through increased diversification, which is the "entry of a firm or business unit into new lines of activity, either by processes of internal business development or acquisition" (Ramanujam & Varadarajan, 1989: 525). Once a firm moves beyond a single business, the main categories of diversification are related and unrelated (Palich, Cardinal, & Miller, 2000). Related diversification occurs when a firm competes in multiple industries, and is able to leverage a common pool of resources whereas unrelated diversification occurs when a firm competes in multiple industries, but is unable to similarly leverage a common pool of resources, making it more difficult for the firm to achieve economies of scope (Palich et al., 2000). However, unrelated diversification can reduce industry-specific risk because the firm is involved in a portfolio of industries (Kim, Hwang, & Burgers, 1989). Agency theory assumes CEOs are risk-averse, therefore they are expected to prefer unrelated diversification because it reduces their employment risk (Amihud & Lev, 1981; Hoskisson & Hitt, 1990; Hoskisson & Turk, 1990). Like a diversified stock portfolio, some businesses should prosper while others languish. This balance helps mask negative performance and makes performance-based punitive action by boards less likely. The evidence suggests an inverted U-shaped relationship between levels of diversification and firm performance. A meta-analysis showed that as firms move from single business to related diversification, performance increases. Then, performance decreases as diversification moves from related to unrelated (Palich et al., 2000).

Despite evidence that board composition is important for governance and strategy, the evidence is equivocal as to the effects of board composition and firm performance: One meta-analysis found little evidence of a relationship between governance structure and firm

performance (Dalton et al., 1998); another suggests that making a board more homogenous by adding insiders or outsiders (but not a blend of both) leads to increased firm performance – insiders because of their firm specific knowledge, and outsiders because of their focus on monitoring (Wagner et al., 1998). A third meta-analysis examining the relationship between outsider director ratios and firm financial performance suggests just a small positive effect (Rhoades et al., 2000). This inconclusive evidence suggests that the effects of board composition and firm performance are probably small and contingent on a number of other factors (Combs et al., 2007). This study does not examine firm performance directly because it has already been examined in the literature. However, the equivocal findings are important to highlight because it suggests the need to get more fine-grained understanding of how board structure impacts key organizational outcomes.

In sum, theory suggests outsider-dominated boards will best monitor CEOs, leading to positive firm performance. Such boards should act as checks against strategies that are not in shareholder interests. Although the evidence supports predictions about checks against poor governance choices and strategies, the evidence does not provide a clear link to firm performance.

CEO Incentive Compensation

Board independence can influence CEO incentive compensation. The primary forms of executive compensation include fixed salary, bonuses, stock options, and stock grants, though there are other forms of remuneration such as retirement benefits. Fixed salary is an important part of executive compensation but it is not tied to firm outcomes. CEOs that earn high ratios of fixed compensation relative to incentive compensation lack incentives to maximize outcomes such as share price. Therefore, such CEOs might be more likely to maximize their personal economic utility by consuming unnecessary perquisites or resisting takeover attempts that are in the best interest of shareholders. Finally, because fixed salary does not incentivize CEOs to take risks (Hoskisson, Hitt, Turk, & Tyler, 1989; Larcker, 1987; Walkling & Long, 1984), they might pursue low-risk strategies.

Incentive compensation such as stock ownership and stock options are two methods boards use to achieve incentive alignment between the CEO and shareholders (Hill & Snell, 1988). This is because giving the CEO an ownership stake in the firm is expected to incentivize CEOs to make decisions consistent with shareholder desires. When compensation includes

sufficient stock and stock options, and following the economic model of man, CEOs are expected to maximize their utility by maximizing shareholder wealth. Thus, CEO compensation should be tightly coupled with shareholder returns. In a lab study examining the relative influence of monitoring and incentives, Tosi, Katz, and Gomez-Mejia (1997) found incentives were more powerful than monitoring for aligning agents with principal desires. Despite the theoretical importance of incentives, however, Jensen and Murphy (1990) found that for every $1,000 increase in shareholder wealth CEO pay increases only $3.25. The encouraging result of the study from an agency theory standpoint is that 80% of the increase in CEO pay was related to stock ownership and stock options. A meta analysis of 159 samples over a 40-year timeframe found no relationship between manager equity (an incentive) and firm performance (Dalton, Daily, Certo, & Roengpitya, 2003). Thus, from an agency theory perspective, overall it appears that incentives are an important component of CEO compensation, but that they are not used in practice to the extent predicted by theory. Also, contrary to agency theory predictions, no link exists between manager equity and firm performance, calling into question the extent to which ownership incentives align CEO and shareholder interests and lead to increased firm performance.

Depending on whether firms are management-controlled (widely dispersed equity ownership) or owner-controlled (large blockholders), incentive and monitoring alignment can differ. A study analyzing reports from 175 chief compensation officers in manufacturing firms showed that incentive and monitoring alignment was greater in owner-controlled firms than management-controlled firms (Tosi & Gomez-Mejia, 1989). CEOs in management-controlled firms also appear to use their power to reduce outcome-based compensation or to pursue strategies inconsistent with shareholder desires. For example, Hill and Snell (1988) conducted a study of 94 firms from five research-intensive Fortune 500 industries and found that the lower the concentration of stock ownership among shareholders, the more likely managers are to pursue diversification. This strategy was also associated with lower firm profitability. Amihud and Lev (1981) studied diversification in terms of ownership structure and found that management-controlled firms have higher levels of diversification than owner-controlled firms. However, Lane et al. (1998) conducted a replication study and a separate study with newer data using Rumelt's (1974) more fine-grained diversification typology and found no link between ownership structure and diversification. Finally, in a study of the consequences of CEO

compensation, Sanders (2001) found stock options are more effective at incentivizing CEOs to take risk than stock ownership. In sum, ownership concentration can affect firm strategies such as diversification. Also, the type of incentive compensation paid to CEOs appears to matter in terms of CEO risk-taking.

In conclusion, CEO incentive compensation is more likely in owner-controlled firms than management-controlled firms. In theory, compensation should be outcome-based, with an appropriate level of incentive compensation to motivate sufficient risk-taking and align CEOs with shareholders.

Duality

The governance literature asserts that the CEO and board chair positions should be separate because the board will have more power (Westphal & Zajac, 1995). Placing the CEO in the dual role of board chair and CEO is a conflict of interest because CEOs cannot manage the firm while performing an unbiased evaluation of their own performance (Kesner et al., 1986). With duality, CEOs can set board agendas (Alderfer, 1986) and minimize the board's oversight effectiveness (Lorsch & MacIver, 1989). Thus, duality arrangements make it more difficult for other board members to challenge top management (Williams & Shapiro, 1979). Such power and control makes CEOs more immune to board controls, which can lead to entrenchment.

Under duality, CEOs might try to entrench themselves by enacting anti-takeover provisions. The stock market should react negatively to enactment of anti-takeover provisions, but market reactions are less negative (Sundaramurthy, Mahoney, & Mahoney, 1997) or even positive (Coles & Hesterly, 2000) with separate board chair and CEO positions, suggesting duality reduces confidence that such provisions benefit shareholders. Finally, manipulating financial reports is another possible consequence of duality. Dunn (2004) conducted a matched sample of 103 firms convicted of submitting fraudulent financial statements, finding such illegal behavior is more likely to occur under conditions of dual CEO-chairs.

Poor firm performance is expected with weak board oversight and a powerful CEO. Some empirical work supports the notion that duality can lead to unfortunate consequences for the firm and its shareholders. Daily and Dalton (1994) found bankrupt firms are more likely to have dual CEO-chairs and more affiliated directors. However, the overall evidence about the duality-performance relationship is unclear. Harris and Helfat (1998) concluded that 10 of 13 studies they reviewed about duality and firm performance found either a positive relationship or

no relationship. A meta analysis found no relationship between duality and firm performance (Dalton et al. 1998). Although the evidence suggests duality structures are bad for governance and strategy, the relationship between duality and firm performance is equivocal.

Board Size

The problems that workgroups face are also applicable to boards of directors because they have similar characteristics (Forbes & Milliken, 1999). As workgroups increase in size, their effectiveness decreases. Similarly, as boards increase in size, their monitoring effectiveness decreases (Herold, 1979). Two primary explanations exist for decreased board monitoring effectiveness in larger boards. First, board size is negatively related to cohesiveness (Forbes & Milliken, 1999; Wheelan & Mckeage, 1993). Summers, Coffelt, and Horton (1988) suggest cohesiveness is related to how much board members are attracted to each other and desire to continue their board service. Cohesiveness is positively associated with group performance (Evans & Dion, 1991), so less cohesive boards are expected to perform poorly compared to cohesive boards. Larger, less cohesive boards appear not to be as involved in deliberations compared to smaller boards (Judge & Zeithaml, 1992).

Further, as boards grow in size, lack of cohesion could be a factor in the difficulty larger boards face coordinating their schedules. This could lead to fewer meetings, and less time available for effective board deliberations. Without effective board deliberations, poor communication could result and thus harm efforts to reach agreement and make important decisions (Yermack, 1996). Combined, lack of cohesion and difficulty coordinating schedules are reasons larger boards have more difficulty deliberating effectively (Herman, 1981) and experience more difficulty monitoring CEOs (Herold, 1979).

Another reason monitoring effectiveness is lower in larger boards is due to the board's effort norms, which influence their use of knowledge and skills (Forbes & Milliken, 1999). Larger boards have lower effort norms (Forbes & Milliken, 1999). Lower effort norms are associated with social loafing (Kidwell & Bennett, 1993; Latane, Williams, & Harkins, 1979), which is "the tendency for individuals to expend less effort when working collectively than when working individually" (Karau and Williams, 1993: 681). In the context of board monitoring, this phenomenon could cause members of larger boards to pay less careful attention to issues because they think other board members will. Thus, the diverse skills and knowledge gained in larger boards can be more than offset by the negative effects of social loafing that result from lower

effort norms (Forbes & Milliken, 1999). In conclusion, as boards increase in size, individual members' monitoring efforts likely decrease (Kidwell & Bennett, 1993; Latane, Williams, & Harkins, 1979; Sheppard, 1993).

Mutual Monitoring

In addition to the board of directors, a second internal control mechanism is mutual monitoring. Whereas outsider directors are primarily involved with decision control, insider directors are primarily involved with decision management (Rediker & Seth, 1995). Managers have an incentive to monitor higher-level managers for two main reasons. The first is because they are in competition for the CEO position (Rediker & Seth, 1995). Secondly, insiders are concerned with how the external job market will value their services (Fama, 1980). In turn, these two reasons for mutual monitoring should lead to more efficient information processing for the board.

The first reason managers have incentive for mutual monitoring is because they are in competition with each other for promotion. This notion is supported by tournament theory, which suggests that lower-level managers compete for promotions and are rewarded with large salary differences when successful (Henderson & Fredrickson, 2001). If a manager offers key insights to the board about a major initiative that might not be in the shareholders' interests, the board might eventually reward the insider with a future promotion. Reporting the decision could give the insider an advantage over other managers who are in competition with each other for promotion. Because of this competition for promotion, Fama (1980) suggests lower-level managers will monitor higher-level managers because they perceive an opportunity to advance.

The second reason managers have incentive for mutual monitoring is because they want to be highly valued by the external labor market (Fama, 1980). Fama suggests that managers essentially rent their human capital to the firm. When the firm performs well, the external labor market should attribute this performance partly to management, resulting in higher potential rents for those managers (Fama, 1980). Thus, managers have an incentive to inform the board of their concerns regarding CEO initiatives that could potentially harm firm performance (Rediker & Seth, 1995). The board might then reject the CEO's initiative, halting implementation and protecting shareholders. This could also protect the future wages managers are able to earn in the external labor market (Fama, 1980).

The CEO's information asymmetry advantage should be less when other insider directors are present because insiders have more information for evaluating the quality of CEO decisions (Baysinger & Hoskisson, 1990; Johnson et al., 1996). Insiders are engaged with the firm's day-to-day operations and they interact more often with the CEO than outside directors. This increased exposure should provide insiders with rich information to evaluate CEO decisions and performance. Also, insiders can share information with outsiders, providing them with helpful information with which to monitor the CEO (Baysinger & Hoskisson, 1990).

Mutual monitoring should also make information gathering more efficient for the board. When there is more than one insider, other perspectives should exist (Palumbo, 2005). This should be especially evident when managers have different views, because the managers are likely to articulate alternative viewpoints to the board. Top managers likely have divergent interests from their CEOs because they are in competition for the top position. Also, managers might disagree with CEO initiatives if they think the initiatives are bad for the firm or might lessen their value on the external labor market. Thus, with multiple board insiders, the board should gain a more complete picture when they deliberate important decisions because the board will be exposed to multiple inside perspectives. Also, the top management team is rewarded on the basis of team output. When the team performs well, this should lead to better firm performance. If top management team compensation has an outcome-based component, then the team has incentive to mutually monitor each other (Welbourne, Balkin, & Gomez-Mejia, 1995). This incentive exists because if misdirected behavior is detected, the team can take action to halt this behavior. One way to halt this behavior would be to discuss it with the board.

Rediker and Seth (1995) suggest that mutual monitoring will act to curb individual managers' freedom to take actions in their own interests but contrary to shareholders. However, if power asymmetry exists in the top management team, mutual monitoring might be difficult (Rediker & Seth, 1995). For example, CEOs with duality or long tenure may possess significant power (Finkelstein, 1992). When CEOs are very powerful, other managers might find it difficult to act on information because they lack the power to do so, which can increase agency problems (Rediker & Seth, 1995).

There are other limits to how much mutual monitoring can reduce agency costs (Rediker & Seth, 1995). CEOs might view insiders as political rivals that provide important information to outsiders and thereby limit their power (Joseph & Ocasio, 2005). Insiders also depend on the

CEO for their jobs (Johnson et al., 1996; Patton & Baker, 1987), thus, CEOs who feel threatened by insiders might take steps to reduce insider power (Joseph & Ocasio, 2005). Because interactions between insiders and outsiders facilitate information transfer and could reduce CEO power (Vancil, 1987), CEOs might benefit by utilizing a lone-insider board structure. This would minimize mutual monitoring and lead to a situation where CEOs exploit their power and information asymmetry advantage to increase their compensation and protect their jobs.

In a study of 81 bank holding companies, Rediker and Seth (1995) found that as the percentage of outsiders increases, that mutual monitoring decreases. They suggest this phenomenon implies a substitution effect of governance. In other words, increasing outsiders decreases the need for mutual monitoring. However, my argument is that in the extreme case of lone-insider boards, the potential loss of information transfer between insiders and outsiders outweighs any advantageous substitution effects and actually decreases the board's monitoring effectiveness.

Lone-insider board structures might create an imbalance between internal and external board member roles. Baysinger and Hoskisson (1990) suggest that inside board members are more likely to base top management rewards on open and subjective evaluation processes, whereas outsider board members lack important knowledge about the firm and are thus more likely to emphasize objective evaluation methods. Insiders interact to produce outputs, and this interaction provides low-cost information about colleagues (Fama & Jensen, 1983). This information can be used by insiders to evaluate managerial competence as well as whether or not strategic initiatives will likely benefit the firm and its shareholders (Baysinger & Hoskisson, 1990). Outsiders need insiders because it helps them monitor CEO decisions (Baysinger & Hoskisson, 1990). Baysinger and Hoskisson suggest that if the first time outsiders hear about a strategic initiative is at a board meeting, that the initiative is likely at the final stage of formulation and outsiders will lack useful subjective information.

Baysinger and Hoskisson (1990) suggest that including insiders on the board helps with information processing. Absent insiders, outsiders lack useful, subjective information and their decisions are likely to be purely objective. Consequently, objective criteria, such as short-term focused financial controls, will likely be used by the board to evaluate outcomes (Baysinger & Hoskisson, 1990). However, some financial controls, such as accounting rates of return are more

easily manipulated by CEOs (Healy, 1985). Thus, lone-insider structures might lead to key organizational outcomes that are contrary to shareholder interests.

In conclusion, insiders have two main incentives to mutually monitor. They want to advance in the corporate hierarchy (Fama, 1980) and some are well-qualified challengers to the CEO (Ocasio, 1994). Also, managers want to be valued by the external labor market. CEOs are aware of mutual monitoring, so it should reduce misdirected behaviors. However, the trend toward firms with boards with CEOs as the lone-insider might represent an attempt by CEOs to increase their power by limiting information flow to outside directors. Thus, it is prudent that we examine some of the outcomes associated with boards that have lone-insider structures.

Summary

When the external labor market, the market for corporate control, and blockholders work well, the following results are expected. The external labor market will punish ineffective CEOs by limiting future employment opportunities and compensation. The market for corporate control will replace ineffective managers with more competent managers, and blockholders can influence management to pursue shareholder-friendly decisions. When external controls reach their limits, internal controls take over, including the board of directors and mutual monitoring. When internal control mechanisms are working properly, CEOs should act largely in accordance with shareholder interests. Good internal controls, through an independent board and mutual monitoring, will help control CEO behavior in terms of corporate governance, executive compensation, and firm strategy. Duality will be limited and strategy should be consistent with shareholder desires. Also, executive compensation will be outcome-based, and vigilant board monitoring should discourage CEOs from taking actions that increase their job security at the expense of shareholder returns. Monitoring should be balanced between a few inside directors who provide important internal information and a majority of outside directors who are able to critically evaluate CEOs and limit their power. CEO duality should be discouraged.

However, all these positive outcomes might not happen in the case of lone-insider boards. As a result of an information asymmetry divide between the CEO and board members, the board might lack the necessary information to make the best decisions for shareholders. Further, the loss of mutual monitoring resulting from no other inside board members could further hamper the board in their effort to effectively monitor CEOs. In sum, lone-insider board structures may

reach beyond the point of maximum board effectiveness. Thus, there is a need to better understand lone-insider boards.

CHAPTER 3
MODEL AND HYPOTHESES

In this chapter, I discuss key organizational relationships I expect to find that are related to lone-insider board structures. The basic premise behind the predicted relationships is that there is a loss of information in boards with lone-insider board structures and that CEOs use this information asymmetry to maximize their personal self-interest. An alternative perspective suggests a substitution effect for mutual monitoring whereby increases in outsiders compensate for decreases in mutual monitoring (Rediker & Seth, 1995). However, I argue that in the situation of lone-insider boards, mutual monitoring is expected to decrease because no other inside board members exist to discuss CEO behavior with the board. In effect, there is a minimum amount of mutual monitoring required that cannot be substituted for by increases in outsiders. This decreased mutual monitoring creates increased information asymmetry between the CEO and board and is expected, in turn, to relate to key organizational outcomes. In the following section, hypotheses are presented that are based upon the theoretical relationships described in Chapter 2. Specifically, I draw on agency theory to describe several relationships that I expect to find between firms having lone-insider structures and key organizational outcomes. Where appropriate, I also describe the moderating role I expect to see with respect to blockholders. The directional relationships among the categories are depicted in Figure 1.
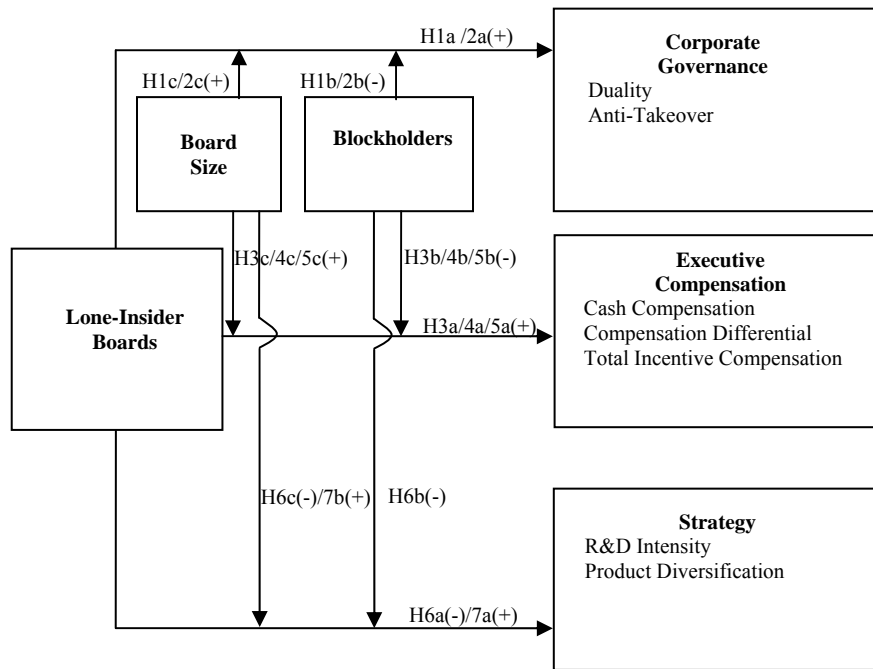
Figure 1: Conceptual Model.

CEOs are a prime example of an agency situation. Because they are not full or even significant owners in most cases, an agency situation exists. This agency situation creates a separation between decision control and decision management in the firm (Fama & Jensen, 1983). The owners (shareholders) elect a board of directors, who are responsible for ratifying or rejecting CEO ideas. The CEO is responsible for implementing the ideas that are approved by the board. However, the separation of decision control from decision management exacerbates information asymmetry. Information asymmetry is present because CEO tasks are complex and non-programmable (Eisenhardt, 1989). Thus, CEO performance is difficult to monitor or measure. Also, the board, composed of insiders and outsiders, meets infrequently, and outsiders are especially distracted by their regular jobs. In fact, most outsiders only get the opportunity to evaluate the CEO through periodic board meetings (Baysinger & Hoskisson, 1990). Thus, they cannot devote close to the full attention required to match the CEO's knowledge and thereby limit information asymmetry. When there are no other insiders, information asymmetry might be worse because outsiders will lack an inside counterpart to provide them information. The CEO is running day-to-day operations and has intimate knowledge of the firm whereas outsiders are part-time and do not have in-depth firm knowledge. Also, the absence of other board insiders can further restrict the information flow from inside the firm to outside board members. This could make the board's monitoring job more difficult, resulting in negative shareholder and organizational outcomes.

Blockholders and board size might mitigate the outcomes resulting from these board structures. For example, the presence of blockholders is more likely to attenuate anti-takeover actions because blockholders are a powerful force that can act as a check against CEO power (Brickley et al., 1988). Alternatively, the absence of blockholders might exacerbate anti-takeover actions that are beneficial to CEOs and detrimental to shareholders. Board size might also interact with lone-insider boards to influence outcomes. For example, smaller boards could be more effective at controlling CEOs because smaller boards function more effectively than larger boards (Jensen, 1993). It is easier for smaller boards to achieve cohesion (Forbes & Milliken, 1999; Wheelan & Mckeage, 1993) and to coordinate their busy schedules (Littlepage, 1991). In contrast, larger boards are more likely to have lower effort norms, which can lead to social loafing (Forbes & Milliken, 1999; Kidwell & Bennett, 1993). If larger boards exhibit social loafing, CEOs might be able to gain control over them and thereby achieve self-interested

outcomes. Thus, throughout this chapter, blockholders and board size play an important moderating role in the effect of lone-insider board structures on several outcome variables.

The hypotheses are categorized broadly into three categories: Corporate governance, executive compensation, and strategy. Corporate governance includes duality and anti-takeover activity. Executive compensation concerns total CEO cash compensation, CEO compensation relative to other top managers, and incentive compensation. Although executive compensation is a component of corporate governance, it has its own well-developed literature and thus a separate section is devoted exclusively to these pay issues. Finally, strategy includes research and development and diversification.

Hypotheses

Corporate Governance

The first area of consideration includes actions that CEOs might utilize in order to entrench themselves in the firm. These include the sub-categories of duality and anti-takeover activity.

Duality

Duality occurs when CEOs hold the titles of CEO and Chairperson of the Board (Rechner & Dalton, 1991). Self-interested CEOs have motivation to be dual CEO-chairs because this structure gives them substantial power (Crystal, 1991; Rechner & Dalton, 1991; Vance, 1983). First, they evaluate the outcomes of the strategies they implement (Desai, Kroll, & Wright, 2003; Jensen & Meckling, 1976; Zajac & Westphal, 1994). Second, dual CEO-chairs lead the board of directors, which has primary responsibility of evaluating CEO job performance (Dalton & Kesner, 1987). Third, dual CEO-chairs set board agendas, allowing them to control the subjects to be deliberated in board meetings (Finkelstein & D'Aveni, 1994). This agenda control can help dual CEO-chairs advance ideas that are in their self-interest.

Lone-insider boards might be apt to award duality because having dual CEO-chairs is a way of signaling unity of command to the organization (Finkelstein & D'Aveni, 1994). Under dual CEO-chair structures, it is clear to employees and shareholders that one person has leadership of day-to-day operations. Unfortunately, the benefits of signaling unity of command might be outweighed by the potentially negative outcome resulting from increased CEO power. The evidence suggests that as the number of outsiders increases, so does duality (Finkelstein & D'Aveni, 1994). Theory suggests that independent boards are giving weak CEOs necessary

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power, but if CEOs are taking advantage of their lone-insider status to increase power, an alternative explanation for Finkelstein & D'Aveni's finding might be that CEOs are using their information asymmetry advantage to argue that they are in the best position to serve as chair. Further, the outsiders might think that their numerical dominance is sufficient and that there is no harm in permitting duality. Thus, hypothesis 1a claims duality is more likely in lone-insider structures than balanced structures.

> *Hypothesis 1a: Firms with lone-insider boards are more likely to also adopt duality structures than other board structures.*

However, when blockholders exist, duality might not be as likely in lone-insider structures. This is because blockholders represent a powerful control mechanism (Useem, 1993). Blockholders are especially interested in board effectiveness, including independent and effective boards (Gordon, 1994) and they might think separate CEO and board chairs is a more effective governance mechanism because it limits CEO power and potential entrenchment. Also, separate positions maintains the separation of decision management from decision control (Desai et al., 2003; Fama & Jensen, 1983). Lorsch and MacIver (1989) suggest that separate positions give directors more input in meetings and reinforce their governance obligation. Therefore, blockholders might lobby the board directly to vote against duality structures when proposed. If duality structures do not already exist, in the presence of blockholders, CEOs might refrain from proposing them. At least one study indicates a negative relationship between duality and the presence of blockholders (Brockman, Hoffman, Dawley, & Fornaciari, 2004). In sum, CEOs of lone-insider boards might not be as likely to try to increase their power through duality structures in the presence of blockholders. Hypothesis 1b posits that blockholders interact with lone-insider board structures to negatively affect the likelihood of duality structures.

> *Hypothesis 1b: The presence of blockholders will moderate the relationship between lone-insider boards and duality structures such that duality is less likely when blockholders exist in lone-insider boards and more likely when blockholders are absent in lone-insider boards.*

Board size is another factor that might influence the likelihood of duality structures among lone-insider boards. Larger boards are less involved than smaller boards (Judge & Zeithaml, 1992) and have more difficulty achieving cohesion (Dalton, Daily, Johnson, & Ellstrand, 1999). Also, as boards grow, it is more likely that board members will withhold some level of effort due to lower effort norms (Forbes & Milliken, 1999; Karau & Williams, 1993). This suggests that larger boards have difficulty functioning effectively (Jensen, 1993). Decreased board involvement necessitates the need for greater organizational leadership. Therefore, CEOs might be awarded duality because the board requires a strong leader. Compared to other board types, CEOs in lone-insider boards possess an information asymmetry advantage over the board. When this information asymmetry advantage is combined with larger boards, the CEO's information asymmetry advantage should grow more acute because other board members will lack the cohesion to collectively demand alternative viewpoints or information from other sources. Because lower effort norms exist in larger boards, it is less likely an outsider will try to lead the board. Thus, larger lone-insider boards should need the CEO's leadership. Overall, it is expected that the information asymmetry advantage that exists in lone-insider boards should combine with larger board size to make duality more likely than in other board types. Hypothesis 1c claims board size interacts with lone-insider board structures to positively affect the likelihood of duality structures.

> *Hypothesis 1c: Board size will moderate the relationship between lone-insider boards and duality structures such that duality is more likely in larger lone-insider boards and less likely in smaller lone-insider boards.*

Anti-takeover Measures

Anti-takeover measures involve situations where policies are passed that are not in the best interest of shareholders, such as adopting poison pill amendments (Sundaramurthy et al., 1997). Despite the evidence that higher proportions of outsiders are associated with fewer adoptions of anti-takeover provisions, I argue the opposite is likely to occur in lone-insider structures. This is because lone-insider structures represent a situation where CEOs are more powerful. Mutual monitoring is largely absent in this structure and CEOs have an information asymmetry advantage over the board. CEOs might use their information asymmetry advantage to

hide their motives for job entrenchment and financial gains and convince the board to approve the proposals nonetheless. Further, many outsiders are CEOs in their home firms, and may have passed similar measures. Davis (1991) found that boards that are interlocked with other boards that had adopted poison pills are more like to adopt them as well. Thus, Hypothesis 2a states the presence of anti-takeover measures is higher under lone-insider structures than under other structures.

> *Hypothesis 2a: Firms with lone-insider boards will implement more anti-takeover measures than firms with other board structures.*

However, blockholders might reduce the ability of lone-insider CEOs to adopt anti-takeover measures. Fortunately for smaller investors, blockholders are a sophisticated, influential and motivated group of shareholders. Thus, they have increased incentive to closely monitor top management and board activities. Because of their level of sophistication and sizable investments, they are less likely to approve actions that are detrimental to their interests. For example, the adoption of poison pills is not in the blockholders interests because such actions can dilute their voting power. Mahoney, Sundaramurthy, and Mahoney (1996) assert that large investors have aided negative shareholder reaction to anti-shareholder measures such as poison pills. Accordingly, I predict anti-takeover measure implementation is lower among lone-insider boards when blockholders are present.

> *Hypothesis 2b: The presence of blockholders will moderate the relationship between firms with lone-insider boards and implemented anti-takeover measures such that anti-takeover measure adoption is lower when blockholders exist in lone-insider boards and higher when blockholders are absent in lone-insider boards.*

Board size should also influence the adoption of anti-takeover measures in lone-insider board structures. If a lone-insider CEO wants to make takeovers more difficult, it might be easier with a larger board. Goodstein, Gautam, and Boeker (1994) suggest larger boards have a more difficult time reaching agreement. Also, larger boards are more likely to lack cohesion compared to smaller boards (Wheelan & Mckeage, 1993). Thus, because of the information advantages that

lone-insider CEOs have, they should have an even greater power advantage over other board structures when their boards are larger because such boards are not as agreeable or cohesive. Therefore, Hypothesis 2c claims board size interacts with lone-insider boards and positively affects anti-takeover adoption.

> *Hypothesis 2c: Board size will moderate the relationship between lone-insider boards and anti-takeover measure adoption such that anti-takeover adoption is more likely with larger lone-insider boards and less likely with smaller lone-insider boards.*

Executive Compensation

Outsiders are a super-majority under lone-insider board structures. During board deliberations, outsiders can act as a powerful coalition and pass various policies. One such policy is executive compensation, which is a primary responsibility of the board (Walsh & Seward, 1990). Because CEOs are risk-averse (Eisenhardt, 1989), they prefer guaranteed cash compensation to variable incentive pay. Also, an assumption of agency theory is that CEOs are self-interested (Eisenhardt, 1989). Therefore, CEOs are expected to prefer very high levels of compensation, even when it creates large pay differentials compared to other top management team members. Finally, although CEOs prefer fixed to incentive compensation, they are unlikely to turn down incentive-based compensation, and outsider dominated boards prefer using financial controls backed up by incentive compensation (Baysinger & Hoskisson, 1990).

According to agency theory, CEOs are risk-averse (Eisenhardt, 1989). Thus, given the choice, they are expected to prefer guaranteed cash compensation to outcome-based incentive compensation. CEOs also possess substantial structural and expert power. Structural power is derived from their position at the top of the organizational hierarchy (Finkelstein, 1992). Expert power accrues when CEOs possess critical expertise (Finkelstein, 1992). When lone-insider structures exist, CEOs have an information asymmetry advantage relative to the board and other top managers, which enhances their power. CEOs with greater power are able to demand greater compensation (Finkelstein & Hambrick, 1989). One reason is that in firms with lone-insider boards, the board might fear the loss of the CEO because succession planning might not exist. If no succession plan is evident, the board might be willing to pay a premium to keep the current CEO in place. Research supports the notion that an apparent lack of succession planning makes

shareholders uneasy. One study found shareholders react negatively when an executive with two titles, such as President and CEO, are given a third title (e.g., Board Chair) (Worrell, Nemec, & Davidson, 1997). Worrell and colleagues suggested this is because shareholders fear a consolidation of executive power, however Harris and Helfat (1998) countered that negative shareholder reaction is due to inadequate CEO succession planning. This interpretation was supported in another study that found shareholder reactions are negative only in the specific case where a dual CEO/Chair takes the president's position (Davidson, Nemec, & Worrell, 2001). Thus, it might be that lone-insider boards pay CEOs higher cash compensation in order to limit unexpected CEO turnover. Shareholders react negatively to unexpected departures of CEOs (Worrell, Davidson, Chandy, & Garrison, 1986).

Higher CEO cash compensation might also be expected under lone-insider structures for social psychological reasons, specifically the norms of reciprocity. Board appointments are lucrative, both in terms of personal prestige and financial rewards (O'Reilly & Main, 2007). Often, board members are CEOs in their home firms. In the context of social ties, reciprocity is a felt obligation to do something for someone else (Gouldner, 1960). For example, one study found that for every $1,000 in fees given to the compensation committee chairperson, CEO pay increases $1,746 (O'Reilly & Main, 2007). If outsider-CEOs are benefiting from lucrative compensation arrangements in their home firms, then as board members, they might be more likely to approve higher compensation for target-firm CEOs due to the social norm of reciprocity. Finally, board members might view their own status indirectly through the pay awarded to the CEOs they monitor (Finkelstein & Hambrick, 1988). Thus, the higher amount boards pay CEOs, the higher status board members might feel. Hypothesis 3a claims that lone-insider boards are more likely than other boards to pay higher rates of cash compensation.

Hypothesis 3a: Firms with lone-insider boards will pay higher rates of cash compensation than firms with other board structures.

However, blockholders might reduce rates of cash compensation. Blockholders represent a powerful external control mechanism that might decrease the impact of lone-insider boards. Because of their substantial equity ownership, blockholders have an incentive to limit unnecessary compensation. Several studies exist regarding the effect of blockholders on

compensation. One study shows blockholders have a negative effect on cash compensation (Cordeiro & Veliyath, 2003). A separate study of large U.S. corporations also finds a negative relationship between the presence of blockholders and executive cash compensation (Mangel & Singh, 1993). Also, major stockholders have more influence over CEO compensation in owner-controlled firms versus management-controlled firms (Tosi & Gomez-Mejia, 1989). Therefore, I expect the presence of blockholders will interact with lone-insider boards to moderate cash compensation.

Hypothesis 3b: Blockholders will moderate the relationship between firms with lone-insider boards and cash compensation such that cash compensation is reduced (increased) in the presence (absence) of blockholders in lone-insider boards.

Board size should also interact with lone-insider boards to influence cash compensation for two reasons. First, larger boards have greater difficulty coordinating compared to smaller boards (Herold, 1979). Second, and related to their difficulty coordinating is social loafing. If board members have difficulty coordinating, then some board members might not take their responsibility as seriously. Instead, they might rely on other board members to ensure cash compensation is appropriate. Several researchers have suggested an inverse relationship between monitoring and group size (Kidwell & Bennett, 1993; Latane et al., 1979; Sheppard, 1993). Compared to CEOs in other board types, CEOs in lone-insider boards can exploit their information asymmetry advantage because their board members do not receive other viewpoints. When boards are larger, board members will be less effective monitors. Overall, it is expected that the CEO's information asymmetry advantage that exists in lone-insider boards will combine with the poorer monitoring that is characteristic of larger boards such that these boards will not challenge CEO demands for greater compensation. Therefore, Hypothesis 3c states board size interacts with lone-insider board structures to positively affect cash compensation.

Hypothesis 3c: Board size will moderate the relationship between lone-insider boards and cash compensation such that cash compensation is higher in larger lone-insider boards and lower in smaller lone-insider boards.

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Another perspective that explains executive compensation is tournament theory. Tournament theory predicts that lower-level managers are in competition for higher-level positions (Henderson & Fredrickson, 2001). One way to incentivize managers to desire a promotion is through substantially higher levels of compensation (i.e., tournament prizes) at higher tiers of the organization. In tournament theory, CEOs have won the grand prize and thus earn substantially higher differentials of cash compensation compared to the next tier of management.

Not only will CEOs demand higher compensation than their peers, they might be less likely in the lone-insider structure to include other managers in pay discussions with the board. From the board's perspective, the increased differentials are an incentive (tournament theory). From the CEO's perspective, there is no need to pay other managers to keep them in line because those managers are not perceived as threats. This is because the other managers have little access to the board. By keeping other managers' pay low, CEOs can justify more for themselves without increasing total compensation for all top managers. Additionally, the board is more likely to justify compensation differentials because it is less likely that a CEO succession plan is in place. Therefore, Hypothesis 4a asserts compensation differentials are higher in lone-insider structures than other structures.

>*Hypothesis 4a: Firms with lone-insider boards will pay higher differentials of cash compensation relative to the next highest paid member of the top management team than firms with other board structures.*

Despite the structural and expert power that lone-insider CEOs wield, blockholders might reduce such CEOs attempts to increase cash compensation differentials because they represent a powerful check against CEO power. Whereas CEOs might have an information asymmetry advantage with the board, blockholders are sophisticated and have incentive to closely monitor CEOs (Shleifer & Vishny, 1986). With substantial voting rights, blockholders can influence boards to resist CEO attempts to appropriate unrealistic levels of compensation relative to other top managers. Blockholders might be sensitive to the behavioral implications of compensation differentials. The behavioral perspective suggests that employees will downplay differences in effort or skills because they prefer equal outcomes (Jasso & Rossi, 1977). Large differences in

pay can cause dissatisfaction (Bloom, 1999; Cowherd & Levine, 1992; Martin, 1982; Pfeffer & Langton, 1993). Therefore, large pay differentials between CEOs and other employees can be perceived as unjust, regardless of the CEO's contribution (Henderson & Fredrickson, 2001). In a review of top management pay dispersion, Devers, Cannella, Reilly, and Yoder (2007) suggest large vertical pay dispersion decreases productivity and leads to lower firm performance. Blockholders want good firm performance and will thus try to influence pay dispersion to remain at realistic levels. Thus, Hypothesis 4b claims that blockholders will interact with lone-insider boards such that executive compensation is at normal differentials relative to other top managers.

> *Hypothesis 4b: Blockholders will moderate the relationship between firms with lone-insider boards and cash compensation differentials between the CEO and next highest paid member such that the differentials paid by lone-insider boards are reduced (increased) in the presence (absence) of blockholders.*

Board size should also interact with lone-insider boards to influence cash compensation differentials. Larger boards have less cohesion and thus more difficulty effectively deliberating. Larger boards can also have more difficulty reaching agreement than smaller boards (Dalton et al., 1999). Additionally, larger boards suffer from lower effort norms (Forbes & Milliken, 1999; Karau & Williams, 1993). If board members are not as engaged in deliberating top management team compensation and suffer from disagreement and poor coordination, CEOs will be able to more easily convince the board to adopt higher compensation differentials. Lone-insider CEOs want large pay and are not likely to advocate for their fellow top management team members in executive compensation discussions. As a result, pay differentials should increase. Comparatively, other board types have more than one inside member. These board structures are more likely to take these members into consideration when setting executive pay rates. Hypothesis 4c states board size interacts with lone-insider board structures to positively affect compensation differentials.

> *Hypothesis 4c: Board size will moderate the relationship between lone-insider boards and compensation differentials such that compensation differentials are higher (lower) when lone-insider boards are larger (smaller).*

Although CEOs likely prefer non-contingent cash compensation to variable, outcome-based compensation, lone-insider boards are unlikely to acquiesce to this desire. Because CEOs of lone-insider firms have an information asymmetry advantage over the board, outside board members have more difficulty collecting in-depth, rich information they can use to evaluate CEOs based on strategic controls. Because it is difficult for them to observe the processes CEOs use to reach decisions, outside board members are more likely to emphasize financial controls instead (Baysinger & Hoskisson, 1990). Therefore, boards might also add large amounts of incentives to pay packages. Conyon and Peck (1998) found that boards with higher proportions of outside directors tend to link pay to performance. CEOs should take actions consistent with the board's emphasis on financial controls, earning higher total variable compensation. Thus, Hypothesis 5 claims that lone-insider boards will offer more contingent-based compensation than other board structures.

> *Hypothesis 5a: CEOs in firms with lone-insider boards will earn higher total incentive compensation than CEOs in firms with other board structures.*

Blockholders are sophisticated investors and should positively moderate total incentive compensation in lone-insider board structures. This is because they are interested in actions aimed at improving firm performance, such as linking CEO pay to firm performance through the use of contingent-based pay. Contingent-based pay can include, but not be limited to, stock options, stock ownership, and performance-related bonuses. Linking CEO pay to firm performance through contingent-based pay structures should motivate CEOs to act in the interest of shareholders. Thus, blockholders will likely use their voting power to influence boards to adopt higher incentive-based CEO compensation structures. Hypothesis 5b asserts blockholders interact with lone-insider boards to positively moderate CEO incentive compensation.

> *Hypothesis 5b: Blockholders will moderate the relationship between lone-insider boards and CEO incentive compensation such that CEO incentive compensation is higher (lower) when blockholders are present (absent) in lone-insider boards.*

Board size should also moderate the relationship between lone-insider board structures and CEO incentive compensation. Larger boards suffer from lower effort norms (Forbes & Milliken, 1999). These lower norms are linked to social loafing (Kidwell & Bennett, 1993; Latane, Williams, & Harkins, 1979). If social loafing is present in larger lone-insider boards, it is less likely the board will actively encourage incentive compensation. CEOs will exploit their information asymmetry advantage with the board and try to convince larger boards to award fixed compensation in lieu of incentive compensation, and lone-insiders are in a particularly strong position to be successful in this regard. Alternatively, smaller boards are more cohesive, have higher norms and thus are more focused on their monitoring responsibilities. Therefore, they are not as likely to agree to the CEO's demands. Instead, they will heed the calls for governance reform and emphasize incentive pay over fixed pay. In comparison to lone-insider boards, other board types have more insiders and thus access to more complete information. Therefore, the CEO's information asymmetry advantage is less. Thus, other boards are more likely to emphasize incentive compensation. Therefore, Hypothesis 5c posits that board size interacts with lone-insider boards such that incentive compensation is higher among smaller lone-insider boards.

> *Hypothesis 5c: Board size will moderate the relationship between lone-insider boards*
> *and CEO incentive compensation such that CEO incentive compensation is higher*
> *(lower) when lone-insider boards are smaller (larger).*

Strategy

Strategy can be conceptualized at the business- and corporate-levels (Hofer & Schendel, 1978). Business-level strategies include steps to improve the competitive position of a business unit. For example, a business unit might utilize a low cost or differentiation strategy (Porter, 1990). Corporate-level strategies are broader in nature than business-level strategies and include decisions that answer the question, "What businesses should we compete in?" (Hofer & Schendel, 1978). Corporate-level strategies can include decisions such as the degree of firm diversification and R&D levels. A significant part of a CEO's job involves developing and implementing strategic initiatives (Fama & Jensen, 1983). CEOs routinely make programmed and non-programmed decisions that affect the firm. These decisions include competitive choices

such as R&D investment levels and diversification (Hambrick & Mason, 1984). According to agency theory, CEOs might make personally wealth-enhancing decisions that are suboptimal for shareholders in these strategic categories. Although there are a variety of strategic actions that could be analyzed, this study examines R&D and diversification because they are two of the most commonly studied strategic actions in the field of strategic management (e.g. Palich et al., 2000).

<u>Research and Development</u>

R&D expenditures represent immediate expenses that can lead to long-term benefits via new product introductions and improved processes. An assumption of agency theory is that agents are short-term oriented (Eisenhardt, 1989). Thus, they could be tempted to reduce R&D spending in order to inflate short-term profits at the expense of long-term improvement. Because shareholders are also short-term oriented in nature (Rappaport, 2006), this strategy will likely be encouraged due to the apparent improvement in the bottom line. Further, because outsider directors rely more on short-term financial controls than strategic controls to evaluate CEO performance, CEOs might favor reductions in R&D spending because of its direct impact on accounting measures of performance (Baysinger and Hoskisson, 1990). A study of 176 Fortune 500 firms' corporate governance and R&D spending concluded that overall R&D investment is positively related to insider board representation (Baysinger, Kosnik, & Turk, 1991). In other words, as insider board representation increases, R&D spending increases as well. This result is somewhat counterintuitive, because CEOs and other insiders are expected to be short-term focused and therefore not favor extensive R&D spending. The authors suggest that outsider-dominated boards might emphasize financial controls, whereas insider-dominated boards emphasize strategic controls. Insider boards might emphasize strategic controls because non-CEO managers are interested in the long-term job market more than CEOs who might have their job on the line on a quarterly basis. Thus, although theory suggests outsider board representation, due to outsiders' independence, is a better check against self-interested CEO behaviors, it might also be that outsiders' emphasis of short-term financial controls can be to the firm's detriment over the long-term.

Lone-insider structures represent a situation where outsiders are maximized. Thus, Hypothesis 6a states R&D spending is lower in lone-insider structures compared to other structures.

Hypothesis 6a: Firms with lone-insider board structures will have lower R&D intensity than firms with other board structures.

However, blockholders might interact with lone-insider boards to influence R&D intensity. In the presence of blockholders, CEOs should be less able to take short-term measures to inflate accounting measures of performance. Blockholders, especially those with long-term investment horizons (i.e., pension funds), would be more likely to lobby management against these efforts. A study examining the relationship between blockholders and R&D investment reveals a negative relationship (Tribo, Berrone, & Surroca, 2007). Thus, in the case of lone-insider boards, although CEOs might be able to persuade the board to approve reductions in R&D investment, blockholders should be able to lobby the board against proposed reductions. Hypothesis 6b claims blockholders reduce the impact of lone-insider boards on R&D investments.

Hypothesis 6b: Blockholders will moderate the relationship between lone-insider boards and R&D investment such that R&D investment is higher (lower) in the presence (absence) of blockholders in lone-insider board structures.

Board size should also interact with lone-insider boards to influence R&D investment. In the presence of larger boards, R&D investment is likely lower compared to smaller boards. As groups grow, it is more difficult for their members to coordinate (Olson, 1982). Also, the more outsiders on a board, the less they are expected to evaluate CEOs based on strategic controls. This is because outsiders have less information to act on than insiders (Baysinger & Hosikisson, 1990). Instead, outsiders are expected to evaluate CEO performance based on financial controls (Baysinger & Hoskisson, 1990). Larger lone-insider boards have the highest proportions of outsider board members; therefore their emphasis is on financial controls. This gives lone-insider CEOs an incentive to reduce R&D spending because it reduces expenses and raises profits, at least in the short-term. When large lone-insider boards exist, the lack of coordination from the larger board combined with the emphasis on financial controls for outside board members should increase the freedom of lone-insider CEOs to negatively influence R&D investment. Smaller

boards are more cohesive (Wheelan & Mckeage, 1993); it is less likely they will approve unrealistic decreases in R&D investment. Other board types will also treat R&D investment differently then lone-insider boards. This is because they have more balanced representation of insiders and outsiders, and thus should shift their focus toward strategic controls (Baysinger & Hoskisson, 1990). Taken together, when a lone-insider board is also large, I expect that the CEO will have even more freedom to reduce R&D spending. Thus, Hypothesis 6c asserts that board size interacts with lone-insider boards to negatively influence R&D intensity.

Hypothesis 6c: Board size will moderate the relationship between lone-insider boards and R&D intensity such that R&D intensity is lower (higher) with larger (smaller) lone-insider boards.

Product Diversification

A key assumption of agency theory is that interests of managers and shareholders diverge (Jensen & Meckling, 1976). Managers want to maximize their personal economic utility, power, and job security whereas shareholders simply want to maximize their wealth (Galbraith, 1967; Marris, 1964; Williamson, 1964). Diversification is an important strategic choice that CEOs consider. There are two main types of diversification, product diversification and geographic diversification. Product diversification is the degree to which firms are involved in different industries whereas geographic diversification is the extent to which firms are involved across geographic regions (Vachani, 1991). This study examines product diversification because there are agency problems associated with product diversification (Ahmihud & Lev, 1981; Hoskisson & Turk, 1990) that do not exist with geographic diversification. Agency theory suggests CEOs will try to grow the firm via product diversification beyond what is in the best interests of shareholders (Palich et al., 2000). Whereas shareholders can diversify their portfolios easily, CEOs are heavily dependent on the firm for their personal employment and financial security. Thus, CEOs have incentive to diversify the firm in order to reduce unsystematic, firm-specific risks associated with a narrower portfolio (Sanders, 2001). If some of the firm's businesses are performing poorly, other business units might be performing well, leading to continued CEO employment and financial security. Hill and Snell (1988) suggest that information asymmetry between managers and shareholders make it difficult for shareholders to judge the attractiveness

of various strategies. CEOs might prefer diversification because CEOs of highly diversified firms can argue for higher pay due to the increased information processing demands associated with greater organizational complexity (Carpenter & Sanders, 2004). One study indicates CEOs are paid more when leading highly diversified or complex firms (Henderson & Fredrickson, 1996). Also, diversification typically increases the size of the firm and size is the single largest predictor of CEO pay (Tosi et al., 2000).

CEOs in lone-insider structures are expected to have an information asymmetry advantage over the board. With this advantage, and less mutual monitoring from other insiders, CEOs might be more apt to convince the board to approve diversification strategies. Thus, Hypothesis 7a states that product diversification levels are higher in lone-insider structures compared to other board structures.

Hypothesis 7a: Firms adopting lone-insider boards will have higher product diversification levels than firms with other board structures.

Board size should interact with lone-insider board structures to impact product diversification levels. Hoskisson, Johnson, and Moesel (1994) discussed the possible impact of adding outsiders to boards. They suggest outsiders might lack rich, quality information they need to make good decisions. Following Baysinger and Hoskisson (1990), they also suggest outsiders will rely on financial controls instead of strategic controls in order to evaluate top management. Also, because outsiders rely on financial controls, they appear more risk-averse than those who are better informed. Larger boards also have more difficulty deliberating issues than smaller boards (Yermack, 1996), and consensus is difficult to achieve for larger boards (Goodstein et al., 1994). Therefore, lone-insider CEOs are in a particularly good position to take advantage of these issues and convince the board to approve their recommendations because no other insiders are on the board to provide outsiders with alternative viewpoints. Prior research has shown a positive relationship between higher proportions of outsiders and diversification (Baysinger, Kosnik, & Turk, 1991; Hill & Snell, 1988, 1989). Compared to larger boards, smaller boards are more cohesive (Wheelan & Mckeage, 1993). Thus, they are more likely to present a united front and decline product diversification proposals when they are perceived to only benefit CEOs financial and/or employment security. In contrast to lone-insider boards, other board types

include more insiders. These insiders can provide alternative perspectives to board members. With alternative perspectives, other board types will not approve product diversification as often as lone-insider boards. Taken together, this implies that lone-insider CEOs will be even more capable of garnering support for diversification initiatives if their board is also large. Therefore, Hypothesis 7b claims larger board size interacts with lone-insider boards to positively influence product diversification levels.

> *Hypothesis 7b: Board size will moderate the relationship between lone-insider boards and product diversification such that product diversification is higher (lower) with larger (smaller) lone-insider boards.*

CHAPTER 4
METHODS

In this chapter I discuss the research methodology used to conduct this study. This includes a description of the sample, the research design, the statistical methods used to analyze the data, and operationalization of the variables.

Sample and Data Sources

The sample includes publicly-held firms from 1997-2001 for which adequate data were available. Leading up to and through 1997, there was increasing interest in the effects of board composition. For example, among the United Kingdom's 1995 Greenbury Committee recommendations was that remuneration committees be composed exclusively of outside directors (Conyon & Peck, 1998). Later, a white paper released by leading U.S. CEOs advocated for greater board independence (The Business Roundtable, 1997). Thus, this sampling timeframe captures a period of increased focus on board independence. The sample concludes in 2001 because of several widely reported corporate scandals in 2001 that could influence board composition and other corporate governance decisions. Sampling beyond this time period could make interpretation more difficult.

Independent and control variables were collected from 1997-2000 and dependent variables were lagged one year (1998-2001). A one-year lag was used because it takes at least one year for the impact of major policy changes to be reflected in annual reports. Also, one year reflects a typical firm planning cycle (Geringer, Beamish, & daCosta, 1989). The objective of this approach is to contrast firms with lone-insider board structures with firms using other board structures to determine if the evidence suggests there are differences in outcomes. Sampling over a five-year period helps control for short-term events. According to McEachern (1975), a multi-year timeframe helps rule out the influence of short-term irregularities.

Data were compiled from three main sources. The first is the RiskMetrics database (formerly the Investor Responsibility Research Center database), which includes board of director information for 1,500 firms from the Standard and Poors (S&P) 500, S&P MidCaps, and S&P SmallCaps (RiskMetrics, 2007). This database has two main parts. The first part is the Directors database, which contains information about boards of directors, including board members' affiliation status. Firm affiliation status is classified in three categories: unaffiliated,

linked, or employee. A firm was identified as a lone-insider board if all members except the CEO were listed as unaffiliated board members. Linked members are those who maintain a professional relationship with the firm, such as legal counsel (Dalton et al., 1998); they were treated as insiders because they are considered dependent on the firm and therefore unlikely to evaluate CEOs without bias (Daily, Johnson, Ellstrand, & Dalton, 1998). The second part of the RiskMetrics database is the Governance database, which contains information on anti-shareholder provisions such as poison pills.

The second main source for data collection was the COMPUSTAT North America database. This database contains executive compensation and accounting information for over 24,000 publicly-held firms, including information primarily related to balance sheet and income statements, as well as some supplemental data items. The third data source is EXECUCOMP. EXECUCOMP contains compensation-related information on over 2,500 firms. Firms were included in the sample only if data was available from all three sources.

Sample Size Needed

An objective of this study is to find evidence that suggests we should reject the null hypothesis (H_0) that there is no significant difference between firms with lone-insider board structures and firms with other board structures on each of seven dependent variables. Thus, we could conclude the evidence suggests significant differences in each dependent variable between lone-insider and other boards, which would be in favor of the alternative hypothesis (H_a). In order to do this with confidence, the required sample size was computed *a priori*.

Three factors influence the required sample size. The first factor is power. Power is the probability that H_0 will be rejected in favor of H_a when the evidence suggests that H_a is true. Power is defined as (1 - ß), which is the probability of accepting H_0 when it is false. In the social sciences, the standard power convention is 0.80 (Cohen, 1992). The second factor influencing sample size is alpha (α), or significance level. Alpha denotes the level of acceptable risk a researcher of making a Type I error (rejecting H_0 when it is true). Organizational research commonly defaults to $\alpha = .05$ (Ferguson & Ketchen, 1999). The effect size is the third factor required to determine sample size. It is the extent to which the independent and dependent variables are related. For the purposes of this study, a conservative estimate of a small effect size ($r = .10$) will be assumed. Cohen (1988) suggests that a small effect size is $r = .20$, but also notes that this number is arbitrary.

Accordingly, required sample size can be calculated when the degrees of freedom and number of independent variables are known (Faul, Erdfelder, & Buchner, 2007). For this study, degrees of freedom are calculated by summing the blockholder and board size interaction terms (two), control variables (nine), and dependent variable under analysis. There is one independent variable, board structure. Based on the above assumptions, the required sample size for this study was 172 firms. The sample requirement was easily surpassed with a sample of 593 firms. Table 1 summarizes the measures, data source, and sample size.

Measures

Independent Variable

Board type. Firms that are considered lone-insider boards have the CEO as the only inside board member, with the remaining members composed of unaffiliated outside members. Firms with lone-insider boards were coded "1" and firms with other board structures were coded "0."

Dependent Variables

Duality. In accordance with previous work, firms in which the CEO is also board chair was coded "1" and all other firms were coded "0" (e.g., Berg & Smith, 1978; Daily & Dalton, 1994; Finkelstein & D'Aveni, 1994; Rechner & Dalton, 1991).

Anti-takeover measures. Following Gompers, Ishii, and Metrick (2003), an index of implemented anti-takeover measures was used. This index includes 24 corporate governance provisions, divided into five broad categories: tactics for delaying hostile bidders (Delay), voting rights (Voting), director/officer protection (Protection), other takeover defenses (Other), and state laws (State) (Gompers et al., 2003). Provisions that erode shareholder rights result in one point for each provision. For example, the existence of poison pills adds a point to the index. The more points, the less shareholder-friendly the firm is. The RiskMetrics database was used to obtain this information. Unfortunately, data for this index are only available in even-numbered years (e.g., 1998 and 2000), which resulted in substantial missing data for this variable. Thus, only 1,862 observations were collected.

Total CEO cash compensation. Total CEO cash compensation is defined as the dollar value of base salary and bonuses earned by the CEO for a given fiscal year (Balkin, Markman, & Gomez-Mejia, 2000). Compensation data was obtained from EXECUCOMP.

Compensation differential. Compensation differential is computed by taking the value of annual salary and bonuses for the CEO and dividing it by the next highest-paid top management team member as displayed in the EXECUCOMP database (Finkelstein, 1992).

Incentive pay. Incentive pay is obtained by summing bonus, the value of restricted stock grants in the year granted, and the Black-Scholes value of stock options in the year granted. The Black-Scholes method is the most commonly used calculation to value stock options (Gerhart & Rynes, 2003). Observations were obtained from EXECUCOMP.

Research & development intensity. R&D intensity is R&D spending divided by sales. According to Hambrick and MacMillan (1985), this is the most commonly used variable in studies of R&D intensity. COMPUSTAT provided this information for the observations.

Diversification. Because the goal of this measure is to assess the extent of diversification, the Herfindahl Index was used (Jacquemin & Berry, 1979). According to Montgomery (1994), the index can be operationalized as one minus the sum of the squared proportions of a firm's total revenues in each of its markets. Diversification data was obtained from COMPUSTAT. According to Davis and Duhaime (1992), the COMPUSTAT database can be effectively used to calculate the Herfindahl Index.

Blockholders. Blockholders is a dummy variable. Blockholders are present if a non-management shareholder owns at least 5 percent of the firm's outstanding shares. Firms with blockholders are coded "1" and firms without blockholders are coded "0." Ownership is measured as the number of outstanding shares owned by the investor. This measure has been used in prior research (Bethel and Liebeskind, 1993) and includes observations obtained from the RiskMetrics database.

Board size. Board size is measured as the number of directors serving on the board. Following Carpenter and Westphal (2001), I control for board size because as board size increases, it might be more difficult for the board to coordinate and thus effectively monitor the CEO (Herold, 1979). Research has also suggested that larger boards become too unwieldy to deliberate effectively (Herman, 1981) and make decisions in a timely manner (Kovner, 1985). Judge and Zeithaml (1992) found that board size is negatively related to board involvement. This measure was obtained from RiskMetrics.

CEO tenure. CEO tenure is the number of years the CEO has held the top position in the firm. Prior research suggests that as tenure increases, CEOs gain more influence, making others more dependent on their firm-specific expertise (Hill & Phan, 1991; Westphal, 1998). Observations were obtained from EXECUCOMP.

Year. Dummy variables will be included for the years 1997-2000. This helps control for any period effects in the time series, such as fluctuations in macroeconomic conditions (Wade, Porac, Pollock, & Graffin, 2006).

CEO shareholdings. CEO shareholdings is the percentage of a firm's shares owned by the CEO. It is calculated by taking the value of the CEO's restricted stock holdings and dividing by the amount of outstanding firm shares. According to the incentive alignment hypothesis (Tosi et al., 1997), self-interested CEO behavior should be inversely related to the level of stock ownership. Thus, the higher the ownership, the more likely CEOs should work to maximize shareholder wealth (Jensen & Meckling, 1976; Jensen & Murphy, 1990). Observations for CEO shareholdings was collected from EXECUCOMP.

Outsider director shareholdings. Outsider director shareholdings are measured as the firm's shares owned collectively by outside directors. Awarding directors stock aligns their interests more closely with shareholders because directors have a personal financial stake in the firm (Kosnik, 1990; Westphal & Zajac, 1995). Outside director shareholder data was collected from the RiskMetrics database.

Firm performance. Firm performance includes return on assets (ROA) and shareholder returns. Observations for hese measures were collected from COMPUSTAT.

Firm size. Firm size is measured as the natural logarithm of sales. It is important to control for firm size because prior research suggests a relationship between firm size and some of the dependent variables in this study, such as executive compensation (Tosi et al., 2000). Firm size was collected from COMPUSTAT.

Blockholder. A blockholder exists when a non-insider owns five percent or more of a firm's outstanding shares. Blockholder is a dummy variable, coded as "1" when one or more exist and "0" when they do not exist. Research suggests blockholders influence corporate governance, executive compensation, and strategy choices. Blockholder information was collected from RiskMetrics.

Board size. Board size was measured as the number of directors serving on the board. Observations were collected from RiskMetrics.

Industry was not used as a control variable. This is due to the time series nature of the models, which used firm effects to control for variance related to industry membership. Firms are embedded in industries, so controlling for firm also effectively controls for industry. Also, fixed effects models are not amenable to control variables that do not vary over time (e.g., Sanders & Hambrick, 2007).

Table 1: Summary of Sample Characteristics.

Measure	Data Source	Sample Size
Board Type	RiskMetrics	3,980
Duality	RiskMetrics	3,900
Anti-takeover Measures	RiskMetrics	1,862
Total CEO Cash Compensation	EXECUCOMP	3,980
Compensation Differential	EXECUCOMP	3,980
Incentive Pay	EXECUCOMP	3,980
R&D Intensity	COMPUSTAT	2,045
Diversification	COMPUSTAT	3,518
Blockholders	RiskMetrics	3,184
Board Size	RiskMetrics	3,980
CEO Tenure	EXECUCOMP	3,553
Year	RiskMetrics	3,980
CEO Shareholdings	EXECUCOMP	3,908
Outside Director Shareholdings	RiskMetrics	3,083
Firm Performance – ROA	COMPUSTAT	3,980
Firm Performance – Shareholder Returns	COMPUSTAT	3,962
Firm Size	COMPUSTAT	3,980
Blockholder	RiskMetrics	3,184
Board Size	RiskMetrics	3,980

Analytical Methodology

This is a panel study using a pooled cross-sectional time series design. Rajagopalan and Datta (1996) suggest there are two benefits from using a pooled cross-sectional design. One benefit is that whereas single cross-sectional designs are susceptible to biased parameter

estimates because of effects peculiar to a particular time period, multiple cross sections reduce the likelihood of biased parameter estimates because conditions differ over the time period (Murray, 1989). Another benefit is stronger internal validity and generalizability because changes in firm conditions are taken into account.

However, pooled time series can cause issues because most firms will have multiple observations over the sampling period. Therefore, the general linear model assumption of independent observations is violated because there are repeated, correlated observations (Finkelstein & Hambrick, 1990). In order to improve estimation, two methods exist that model different intercepts for each cross-sectional unit (Kennedy, 2003). The first method is a fixed effects model. For each firm, a dummy variable is entered, allowing each firm to have its own intercept. A data transformation subtracts each firm's variable observation from the average of the other firm variable observation values, which results in an improved slope estimate (Kennedy, 2003). However, this approach has drawbacks because potentially thousands of dummy variables will be created, resulting in a substantial loss of degrees of freedom. Additionally, the data transformation step eliminates any explanatory variable that does not vary over time, making it impossible to estimate a slope coefficient for that particular variable (Kennedy, 2003). For example, this could eliminate variables such as board size, blockholders, and director options, because these variables generally do not change over time, or change little over time.

The second option for allowing different intercepts for each firm is a random effects model. A different intercept still exists for each firm in theory, however

> "this procedure views the different intercepts as having been drawn from a bowl of possible intercepts, so they may be interpreted at random (usually assumed to be normally distributed) and treated as though they were a part of the error term." (Kennedy, 2003: 304)

The result of this estimation procedure is an intercept for each firm, explanatory variables, a random error term, and a composite error term composed of two parts. The first part of the composite error term is called a random intercept term. It estimates how much the individual firm's intercept differs from the overall intercept. The second part indicates random deviation for the individual firm in the particular time period (Kennedy, 2003). Compared to the fixed effects model, the random effects model conserves degrees of freedom and gives a more

efficient estimate of the slope coefficients (Kennedy, 2003). An example of a random effects model is shown below (Nichols, 2006):

$$y_{it} = \beta_0 + \beta_1 x_{it1} + \beta_2 x_{it2} + \ldots + \beta_k x_{itk} + a_i + u_{it} + e_{it}$$

where:

y_{it} = dependent variable of interest for a unique firm i in year t

β_0 = slope coefficient

β_1 = coefficient for the independent variable

x_{it1} = independent variable observation for firm i in year t

β_2 = coefficient for the first control variable

x_{it1} = first control variable observation for firm i in year t

β_k = coefficient for the kth control variable

x_{itk} = k^{th} control variable observation for firm i in year t

a_i = random intercept term

u_{it} = random deviation for firm i in year t

e_{it} = random error for firm i in year t

To decide between fixed and random effects, both models were run and then compared using the Hausman procedure for each main hypothesis (Hausman, 1978). The Hausman procedure uses a test statistic that "is asymptotically distributed as a chi-square with degrees of freedom equal to the rows of each coefficient vector" (Qian, Li, Li, & Qian, 2008). If the χ^2 difference test is significant, a fixed effects model is recommended. Otherwise, a random effects model is recommended.

Data analysis was conducted using STATA, which uses listwise deletion for missing observations (Allison, 2002). Thus, an entire firm-year observation was eliminated whenever a variable had a missing observation. Because this study estimated separate equations for seven separate outcome variables, the sample size varied with the dependent variable under investigation. This caused a wide variance in the number of firm-years used to test the hypothesized relationships. The initial sample included 3,980 lone-insider board firm-year observations. Listwise deletion is superior to other more sophisticated alternatives such as multiple imputation, and is more robust to violations of the assumption that data are missing at random (Allison, 2002). Finally, when the probability of the missing data for an independent

variable is not a function of the dependent variable, listwise deletion performs well (Allison, 2002). However, listwise deletion caused the sample to vary from a minimum of 593 observations for duality to a maximum of 2,329 observations for total CEO cash compensation, compensation differential, and CEO incentive compensation. A t-test was performed to compare cases with complete observations to those with missing observations for the independent and control variables. The implication of this selection bias is discussed further in Chapter 6.

Hypotheses 1a, 1b, and 1c examine the relationship between board type and duality, a dichotomous dependent variable. Binary logistic regression is commonly used to analyze limited dependent variables where the assumptions of ordinary least squares (OLS) are violated (Kutner, Nachtsheim, Neter, & Li, 2005). Duality is a categorical variable. Therefore, a fixed effects binary logistic model was used to test Hypotheses 1a-1c. This method models heteroscedastic error variance and the non-normal distribution of the dependent variable (Bowen & Wiersema, 2004).

Binary logistic regression uses the maximum likelihood method of estimation (Eliason, 1993). In this estimation method, the natural logarithm of the model's likelihood function is maximized, rather than the likelihood function itself, and is used to test the model hypothesis and coefficient estimates (Bowen & Wiersema, 2004). Also, the estimates are asymptotically distributed, efficient and consistent (Bowen & Wiersema, 2004), and is recommended for sample sizes greater than 500 (Long, 1997).

$Y_i = 1$ if duality is present in the firm-year observation

$Y_i = 0$ if duality is not present in the firm-year observation

$X = (X_1, X_2, \ldots, X_k)$ represent the independent and control variables in the study.

The estimation procedure makes the log-likelihood function Π_i, where,

$$\Pr (Y_i = 1 \mid X_i = X_i) = \frac{\exp (\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_k x_{k)}}{1+\exp (\beta_0 + \beta_1 x_i + \beta_2 x_2 + \beta_k x_k)}$$

This function suggests the probability that the event (in this case, duality) will occur, whereas one minus the function suggests the probability the event will not occur (Kennedy, 2003). The equations were tested as fixed and random effects models. The Hausman test suggested a fixed effects model be used.

For Hypotheses 2a-2c, a fixed effects linear regression model was estimated for anti-takeover measures. This regression equation has an intercept, beta coefficients representing the independent, interaction, and control variables, as well as an error term. The estimation model for Hypotheses 2a-2c is:

$$Y_{it} = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_1 x_2 + \ldots + \beta_k x_k + e_i$$

where:

Y_{it} = the number of anti-takeover measures for firm i in year t

β_0 = y-intercept

β_1 = slope coefficient for variable x_1

β_k = slope coefficient for variable x_k

x_1 = board type (1 = lone-insider, 0 = other)

x_k = k^{th} control variable

e_i = k^{th} error term

Unfortunately, data for this variable was only available in 1998 and 2000. As a result, this model initially failed to converge (i.e., sample size not given) because of insufficient observations. The issue was traced to director shares, a control variable. When this variable was dropped from the model, the model then had enough observations to run properly (N = 1,281). Therefore, results for Hypotheses 2a-2c are reported without this control variable.

Hypotheses 3 through 7 required endogeneity controls because some of the dependent variables could have causal relationships with each other. Hypotheses 3-5 investigate total CEO cash compensation, compensation differential, and CEO incentive compensation. Hypotheses 6-7 examine R&D intensity and product diversification. Therefore, a two-stage least squares (2SLS) procedure wherein the predicted values from a first-stage regression of the dependent variable on selected instrumental variables became the endogeneity control in the hypotheses tests. Based on Hausman tests, fixed effects models were used to test Hypotheses 2-7.

One particular area of concern in this study is multicollinearity. Multicollinearity is the degree that variables are correlated with each other (Schwab, 2005). This can be an issue because highly correlated variables can make it more difficult to detect the statistical significance of regression coefficient estimates, can result in biased estimates of standard errors, and coefficients that display the wrong mathematical sign (Cohen, Cohen, West, & Aiken, 2003). Fortunately,

diagnostic measures exist to detect multicollinearity (Belsley, Kuh, & Welsch, 1980; Greene, 2003). The effects of multicollinearity were assessed by examining the variance inflation factors (VIFs) for each variable in hypotheses tests. If the VIF exceeds 10, multicollinearity is potentially problematic (Neter, Wasserman, & Kuter, 1985). The largest VIF was less than 2.0, thus multicollinearity does not appear to be a problem. As an additional precaution however, I mean-centered the interaction terms to reduce the possible influence of collinearity when testing for moderation (Aiken & West, 1991).

CHAPTER 5

RESULTS

In this chapter I discuss the statistical results for the hypotheses that were developed in Chapter 3. Descriptive statistics are reported, followed by the results of the hypotheses tests. One-tailed tests were used to test the directional hypotheses; all other reported significance levels are based on two-tailed tests. A summary of the results is located in Table 10.

Descriptive Statistics

Table 2 presents the means, standard deviations, and bivariate correlations for the data used to analyze the predictions related to lone-insider board outcomes. Relationships among dependent and control variables are mostly consistent with prior research. Specifically, the relationship between CEO tenure and duality is positive. As CEOs hold their positions longer, they tend to gain more power, including duality. Also as expected, the relationship between CEO tenure and CEO shareholdings is positive, which suggests that as CEOs serve longer, they have greater personal financial investment in the firm. Also, CEO founders own more shares and remain at their firms longer than non-founders.

Firm size is positively correlated with duality; larger firms tend to have duality more than smaller firms. Firm size is also positively correlated with board size. As firms get larger, so do their boards, most likely due to the complexity of the relationships that firms need to manage (Hillman & Dalziel, 2003). Finally, firm size is positively correlated with total CEO cash compensation, compensation differential, and CEO incentive pay. These positive correlations are expected given past research (Tosi et al., 2000).

Product diversification is positively correlated with anti-takeover measures, meaning more highly-diversified firms tend to be less shareholder friendly than less-diversified firms. Shareholder returns are negatively correlated with anti-takeover measures, as expected. Board size is positively correlated with anti-takeover measures, which suggests that larger boards are not as shareholder friendly as smaller boards. This is understandable from an agency theory point of view where larger boards are not as effective at monitoring. CEOs can exploit their information asymmetry advantage with larger boards because they have more difficulty coordinating and monitoring than smaller boards. However, CEO tenure is negatively correlated with anti-takeover measures. From an agency theory perspective, this is somewhat surprising

because it suggests that longer CEO tenure results in more shareholder-friendly actions, whereas shorter CEO tenure results in fewer shareholder-friendly actions. Perhaps this is because as CEO tenure increases, so does their personal financial stake in the firm. Thus, it is actually to their benefit to take actions that are more in favor of shareholders.

The presence of blockholders is negatively correlated with product diversification, suggesting that product diversification is lower when blockholders are present and higher when blockholders are not present. Interestingly, blockholders are negatively correlated with board size. Possibly this is a substitution effect wherein larger boards are better able to monitor top management and therefore blockholders are not needed (Rediker & Seth, 1995). Alternatively, perhaps the blockholders (e.g., family) want to maintain tight control by keeping the board small. CEO tenure is negatively correlated with product diversification. This might be because more highly-diversified firms cause higher information processing demands on CEOs (Carpenter & Sanders, 2004) and fewer CEOs are qualified to handle this demanding task. Therefore, CEO turnover might be higher in more highly-diversified firms. Some other correlations are interesting as well. Firm size is negatively correlated with R&D intensity, suggesting that smaller firms invest more as a percentage in R&D intensity than larger firms. This is probably due to economies of scale.

Table 2: Descriptive Statistics.

	N	Mean	S. D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Board Type[1]	3980	0.12	0.32																
2. Duality[1]	3900	0.61	0.49	.01															
3. Anti-Takeover Measures	1862	9.16	2.72	.03	.09**														
4. Total Cash Compensation[4]	3980	1.41	1.65	-.02	.10**	.03													
5. Compensation Differential	3980	1.73	1.15	.05**	.07**	.07**	.48**												
6. Incentive Pay[4]	3980	5.15	19.82	.01	.01	-.02	.23**	.02											
7. R&D Intensity	2045	0.10	0.67	.01	-.04	-.16**	-.03	-.03	.00										
8. Diversification	3518	0.29	0.27	-.00	.10**	.20**	.13**	.03	-.02	-.06**									
9. Blockholders[1]	3184	0.76	0.43	.08**	-.03	-.02	-.12**	-.01	-.02	.02	-.08**								
10. Board Size	3980	9.46	3.24	-.21**	.14**	.23**	.22**	.02	.02	-.07**	.22**	-.27**							
11. CEO Tenure	3553	8.43	7.93	-.07**	.04*	-.12**	.01	.02	.00	-.01	-.04*	-.02	-.10**						
12. Director Shares[3]	3083	1.08	7.34	.03	-.02	-.04	.02	-.02	.04*	-.00	.03	-.07**	.12**	-.04					
13. CEO Shareholdings[4]	3908	5.03	116.56	-.01	.03	-.02	.04**	-.03	.01	-.01	-.01	-.07**	.06**	.04*	.01				
14. ROA	3980	5.02	11.23	-.02	.00	.02	.04*	.03*	.04**	-.18**	-.04*	-.03	-.01	.06**	.02	.02			
15. Shareholder Returns	3962	20.79	68.29	.01	-.00	-.10**	.07**	.02	.12**	.01	.09**	.00	-.06**	.03	-.01	.01	.13**		
16. Firm Size[2]	3980	7.35	1.45	-.07**	.16**	.18**	.47**	.05**	.17**	-.21**	.28**	-.22**	.50**	-.08**	.09**	.03*	.11**	-.02	
17. Year	3980			.04*	-.03	.00	.03	.02	.04*	.04	.02	.08**	-.02	-.04*	.03	-.01	-.01	-.03	.03*

*p < .05, **p < .01

[1] Correlations with dichotomous variables are reported as point-biserial correlations, all other correlations are reported as Pearson correlations.
[2] Logarithm of sales.
[3] In millions of units.
[4] In thousands of units.

Methods

  Hypotheses 1a, 1b, and 1c were tested using fixed effects binary logistic regression models. The likelihood of the predicted event occurring is called the odds ratio. Hypothesis 1a states that lone-insider boards are more likely to have duality structures. The relationship between lone-insider boards and duality is positive (b = .64; $p < .06$). Therefore, Hypothesis 1a receives weak support. The odds ratio for lone-insider boards is 1.90, meaning that lone-insider boards are 1.90 times more likely to occur in duality structures than other board types. Hypothesis 1b predicts that blockholders moderate the relationship between lone-insider boards and duality, such that duality is less likely among lone-insider boards in the presence of blockholders and more likely among lone-insider boards without blockholders. The blockholder interaction term is positive, but in the opposite direction than predicted (b = 1.88; $p < .10$). Thus, Hypothesis 1b is not supported. Hypothesis 1c asserts that board size moderates the relationship between lone-insider boards and duality, such that larger lone-insider boards lead to more duality and smaller lone-insider boards lead to less duality. The interaction term coefficient is positive (b = .35; $p < .06$). Thus, board size moderates the lone-insider board to duality relationship, lending weak support for Hypothesis 1c. The odds ratio for the board size interaction term is 1.42, meaning that larger lone-insider boards are 1.42 times more likely to occur in duality structures than smaller lone-insider boards. Table 3 shows the hypotheses test results of Hypotheses 1a, 1b, and 1c, Figure 2 depicts the plot of the blockholder interaction term, and Figure 3 depicts the plot of the board size interaction term.

Table 3: Results of Binary Logistic Regression for Duality.

	Model 1		Model 2		Model 3	
	Coefficient	Odds Ratio	Coefficient	Odds Ratio	Coefficient	Odds Ratio
Blockholders	.46	1.59	.44	1.55	.52	1.68
Board Size	-.10	0.90	-.07	0.93	-.08	0.97
CEO Tenure	-.03	0.97	-.03	0.97	-.03	0.97
Director Shares	-.17	0.84	-.20†	0.82	-.26†	0.77
CEO Shares	-.09*	0.92	-.09†	0.92	-.08†	0.92
Return on Assets	.05**	1.05	.05*	1.05	.05*	1.05
Shareholder Returns	.00	1.00	-.00	1.00	.00	1.00
Firm Size	.53	1.70	.46	1.59	.53	1.71
Year	-.26*	0.77	-.26*	0.77	-.25*	0.78
Direct Effect Lone-Insider Board			.64†	1.90	.54	1.72
Interaction Effects Board Type * Blockholders					1.88†	6.58
Board Type * Board Size					.35†	1.42
Wald χ^2	23.09**		25.66**		29.69**	

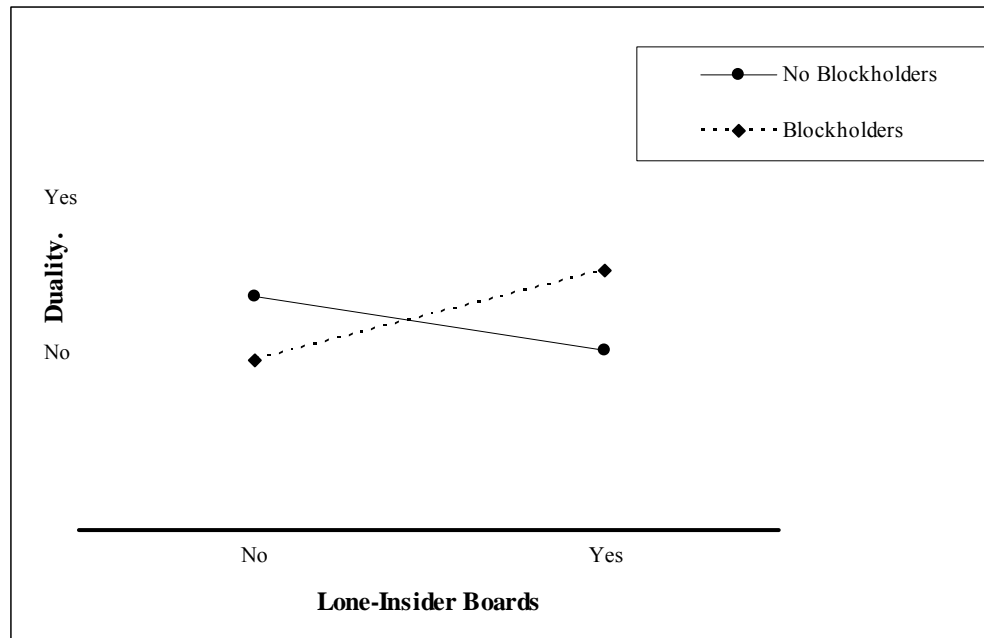N = 593. *** p<.001, ** p<0.01, * p<0.05, † p<0.1

Figure 2: Plot of Interaction of Lone-Insider Boards and Blockholders for Duality.
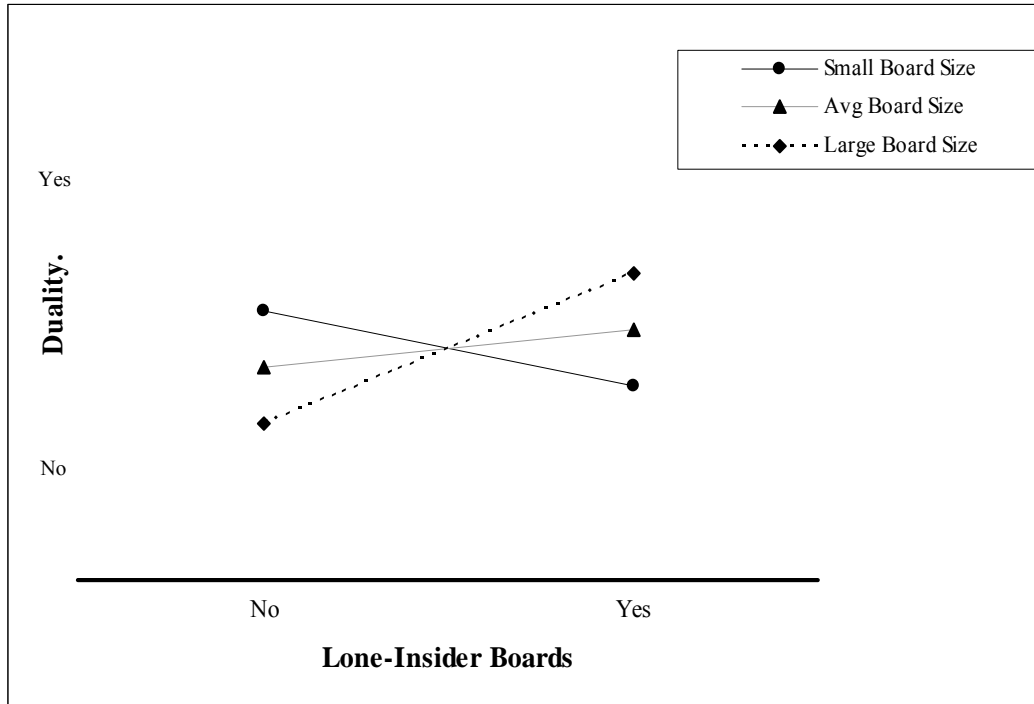
Figure 3: Plot of Interaction of Lone-Insider Boards and Board Size for Duality.

Hypotheses 2a, 2b, and 2c were tested as fixed effects models using generalized least squares regression. These hypotheses pertain to anti-takeover measures, where I only had observations for two years. Hypothesis 2a states that anti-takeover measures are higher in the presence of lone-insider boards. The regression results indicate that the lone-insider board type coefficient is not significant (b = .09; p > .28). Therefore, Hypothesis 2a is not supported. Hypothesis 2b introduces blockholders as a moderator in the lone-insider board-anti-takeover measure relationship, and posits that anti-takeover measures among lone-insider boards are lower (higher) in the presence (absence) of blockholders. The blockholder interaction term is not significant (b =.15; p > .32). Thus, Hypothesis 2b is not supported. Finally, Hypothesis 2c introduces board size as a moderator between lone-insider boards and anti-takeover measures, such that as lone-insider boards increase in size, anti-takeover measures increase, but as lone-insider boards decrease in size anti-takeover measures decrease. The results indicate the board size interaction term coefficient is not significant (b = -.01; p > .45). Therefore, Hypothesis 2c is not supported. Table 4 shows the hypotheses test results of Hypotheses 2a, 2b, and 2c.

Table 4: Regression Results for Anti-Takeover Measures.

	Model 1	Model 2	Model 3
Constant	-163.06**	-161.57**	-162.84**
Controls			
Blockholders	-.23*	-.23*	-.22*
Board Size	.02	.02	.02
CEO Tenure	-.01	-.01	-.01
CEO Shares	-.00	-.00	-.00
Return on Assets	-.01	-.01	-.01
Shareholder Returns	.00	.00	.00
Firm Size	.13	.13	.13
Year	.09**	.09**	.09**
Direct Effect			
Lone-Insider Board		.09	.07
Interaction Effects			
Board Type * Blockholders			.15
Board Type * Board Size			-.01
R^2	.052**	.052**	.053**
ΔR^2		.000	.001

N = 1,281. † $p<0.1$, * $p<.05$, ** $p<.01$, *** $p<.001$

Fixed effects regression models were utilized for Hypotheses 3a, 3b, and 3c. Results of these hypotheses tests are shown in Table 5. Hypothesis 3a tests the relationship between lone-insider boards and total CEO cash compensation. The coefficient was negative (b = -.32; $p <$ .02), which is in the opposite direction than hypothesized. Thus, Hypothesis 3a is not supported. Blockholders were introduced as a moderator between lone-insider boards and total CEO cash compensation in Hypothesis 3b, stating that when blockholders are present among lone-insider boards, total CEO compensation decreases, but increases among lone-insider boards when blockholders are not present. The blockholder interaction term is positive (b = .61; $p < .05$). The coefficient is in the opposite direction than hypothesized. Thus, Hypothesis 3b is not supported. Hypothesis 3c claims that board size moderates the relationship between lone-insider boards and total CEO cash compensation such that total CEO cash compensation among larger lone-insider boards is higher, but is lower among smaller lone-insider boards. The results indicate the board size coefficient is positive (b = .24; $p < .001$). Thus, Hypothesis 3c is supported. Figure 4 depicts

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the plot of the significant lone-insider board by blockholder interaction term, and Figure 5 depicts the plot of the significant lone-insider board by board size interaction term.

Table 5: Regression Results for Total CEO Cash Compensation.

	Model 1	Model 2	Model 3
Constant	-138.92†	-142.19†	-127.50†
Controls			
Blockholders	-.30*	-.30*	-.29*
Board Size	.00	-.01	.01
CEO Tenure	-.00	-.00	-.00
Director Shares	.01	.01	.01
CEO Shares	.01	.01	.01
Return on Assets	-.00	-.00	-.00
Shareholder Returns	.00	.00	.00
Firm Size	-.12	-.12	-.11
Year	.07†	.07†	.06†
Endogeneity Control	.16***	.16***	.15***
Direct Effect			
Lone-Insider Board		-.33*	-.20
Interaction Effects			
Board Type * Blockholders			.61*
Board Type * Board Size			.24***
R^2	.131***	.134***	.145***
ΔR^2		.003	.011

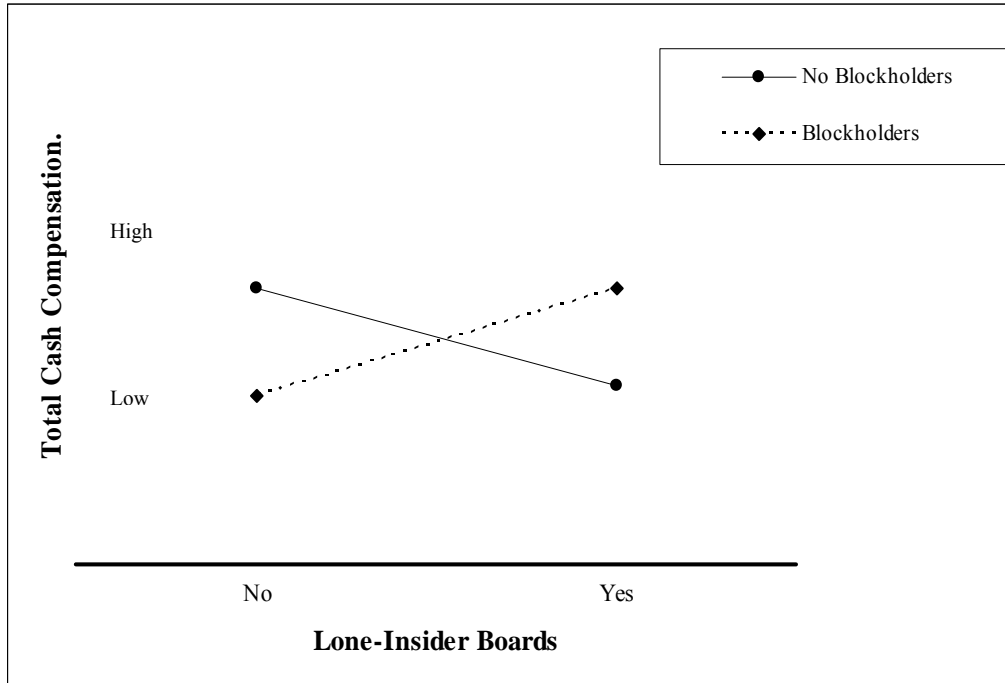N = 2,329. † p<0.1, * p<.05, ** p<.01, *** p<.001

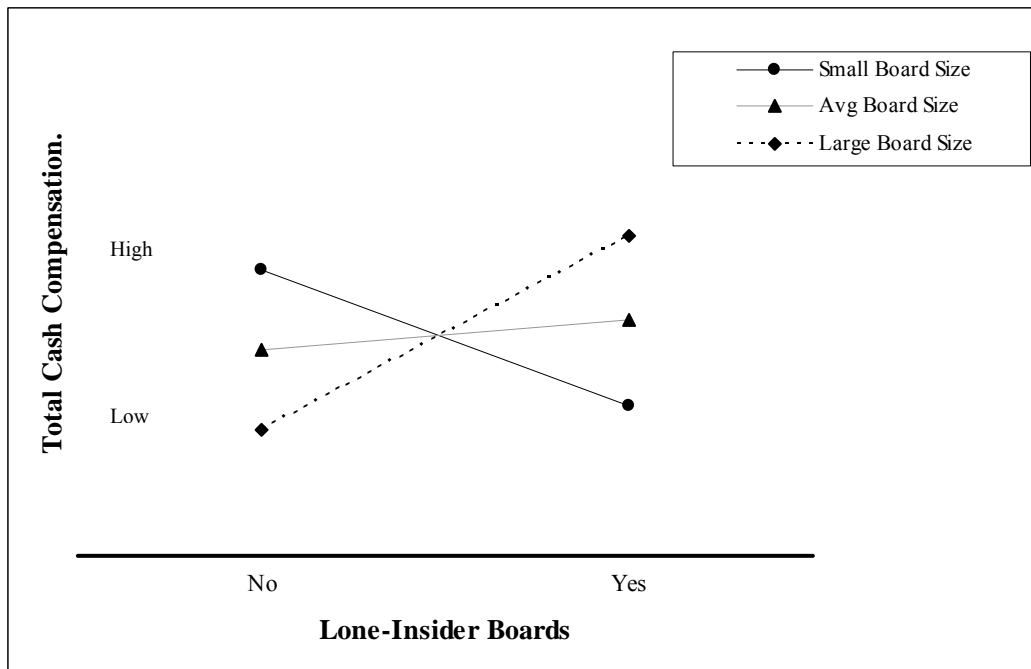Figure 4: Plot of Interaction of Lone-Insider Boards and Blockholders for Total CEO Cash Compensation.

Figure 5: Plot of Interaction of Lone-Insider Boards and Board Size for Total CEO Cash Compensation.

The Hausman test also recommended fixed effects models to estimate the equations for Hypotheses 4a, 4b, and 4c ($\chi^2 < .05$). Results are reported in Table 6. Hypothesis 4a claims that lone-insider boards increase compensation differentials between the CEO and the next highest paid officer in the firm. Results indicate that the relationship between lone-insider boards and compensation differential is negative (b = -.18; $p < .06$). Thus, Hypothesis 4a is not supported. Next, I tested whether blockholders moderate the relationship between lone-insider boards and compensation differential in Hypothesis 4b. This hypothesis posits that when blockholders are present among lone-insider boards, compensation differential will be lower, but higher among lone-insider boards when blockholders are not present. The relationship between the blockholder interaction term and compensation differential is positive (b = 1.52; $p < .001$), which is in the opposite direction than hypothesized. Therefore, Hypothesis 4b is not supported. Finally, Hypothesis 4c claims that board size moderates the relationship between lone-insider boards and compensation differential such that larger lone-insider boards result in higher compensation differentials, but smaller lone-insider boards result in lower compensation differentials. The board size interaction coefficient is positive (b = .12; $p < .01$). Thus, Hypothesis 4c is supported. Figure 6 depicts the plot of the significant lone-insider board by blockholder interaction term, and Figure 7 depicts the plot of the significant lone-insider board by board size interaction term.

Table 6: Regression Results for Compensation Differential.

	Model 1	Model 2	Model 3
Constant	-38.30	-40.27	-23.55
Controls			
Blockholders	-.03	-.03	.01
Board Size	-.00	-.01	-.00
CEO Tenure	-.01	-.01	-.01
Director Shares	.00	.00	.00
CEO Shares	$-.01^{\dagger}$	$-.01^{\dagger}$	$-.01^{\dagger}$
Return on Assets	.00	.00	.00
Shareholder Returns	-.00	.00	.00
Firm Size	.15	.15	.17
Year	.02	.02	.01
Endogeneity Control	3.84^{***}	3.83^{***}	3.82^{***}
Direct Effect			
Lone-Insider Board		$-.18^{\dagger}$	$-.25^{*}$
Interaction Effects			
Board Type * Blockholders			1.52^{***}
Board Type * Board Size			$.12^{**}$
R^2	$.485^{***}$	$.486^{***}$	$.502^{***}$
ΔR^2		.001	.016

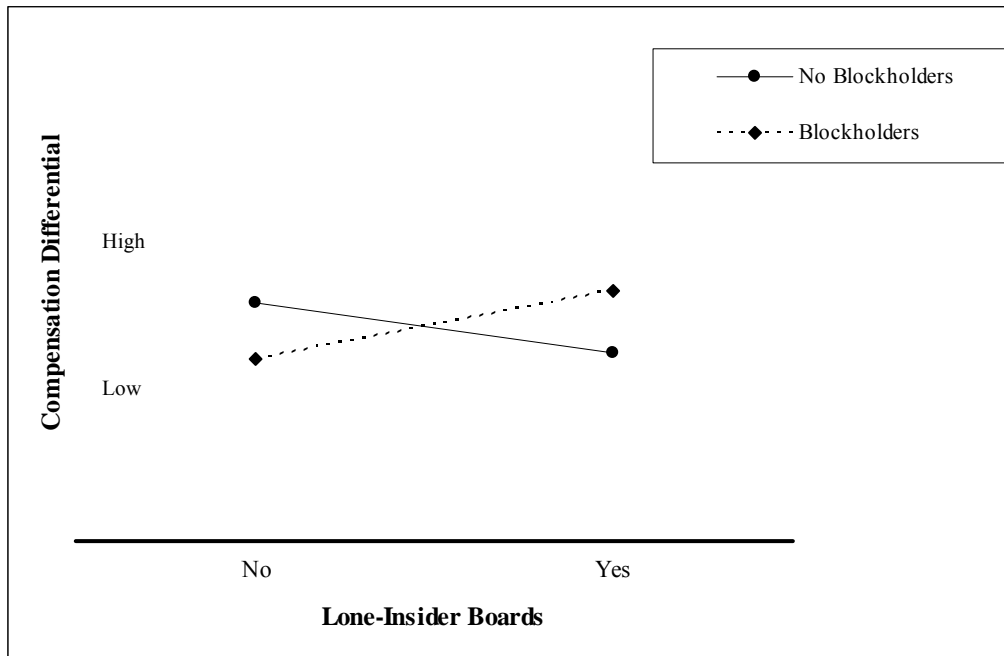N = 2,329. † p<0.1, * p<.05, ** p<.01, *** p<.001

Figure 6: Plot of Interaction of Lone-Insider Boards and Blockholders for Compensation Differential.
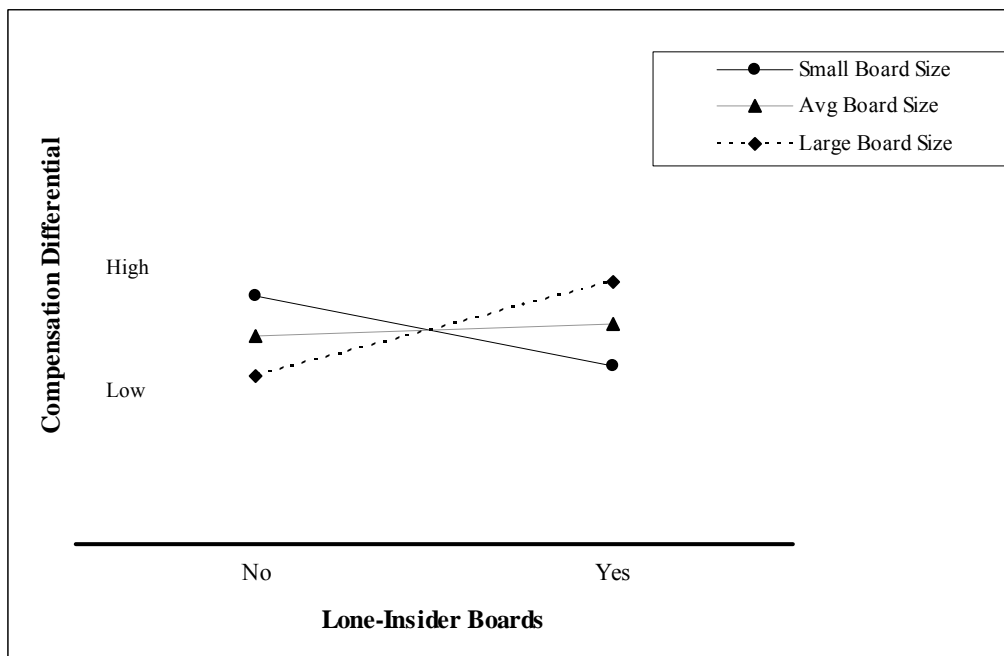

Figure 7: Plot of Interaction of Lone-Insider Boards and Board Size for Compensation Differential.

Hypotheses 5a, 5b, and 5c were also tested with fixed effects models. Results are reported in Table 7. Hypothesis 5a states that lone-insider boards influence CEO incentive compensation. The coefficient is positive (b = 3.54; $p < .05$). Therefore, Hypothesis 5a is supported. Blockholders were introduced as a moderator for Hypothesis 5b. Specifically, it was hypothesized that blockholders influence the relationship between lone-insider boards and CEO incentive compensation such that CEO incentive compensation is higher among lone-insider boards in the presence of blockholders and lower among lone-insider boards in their absence. The coefficient for the interaction term is positive (b = 20.11; $p < .001$). Therefore, Hypothesis 5b is supported. Specifically, this result suggests that CEO incentive compensation is higher for lone-insider boards in the presence of blockholders. Thus, Hypothesis 5b is not supported. Hypothesis 5c introduces board size as an interaction between lone-insider boards and CEO incentive compensation. Specifically, this hypothesis states that as lone-insider boards increase in size, CEO incentive compensation decreases, whereas CEO incentive compensation increases as lone-insider boards decrease in size. The coefficient is not significant (b= -0.89; p > .14). Thus, Hypothesis 5c is not supported. Figure 8 depicts the plot of the significant lone-insider board by blockholder interaction term.
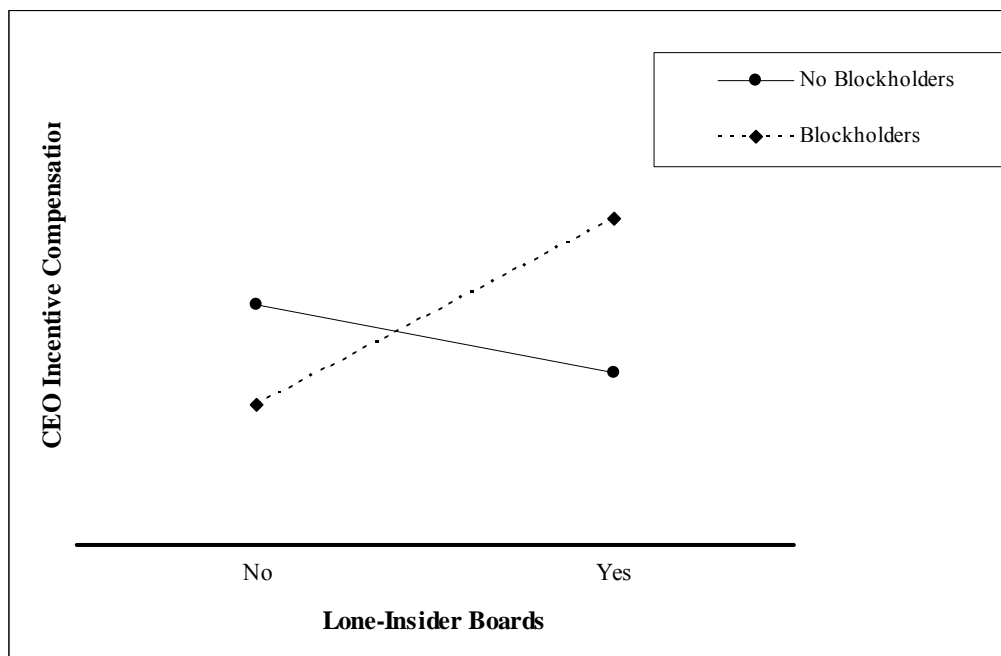

Figure 8: Plot of Interaction of Lone-Insider Boards and Blockholders for CEO Incentive Compensation

Table 7: Regression Results for CEO Incentive Compensation.

	Model 1	Model 2	Model 3
Constant	107.05	142.65	250.54
Controls			
Blockholders	2.49	2.51*	2.99†
Board Size	.21	.32	.21
CEO Tenure	.11	.11	.10
Director Shares	.26†	.26†	.27†
CEO Shares	-.08	-.08	-.07
Return on Assets	-.02	-.02	-.01
Shareholder Returns	.00	.00	.00
Firm Size	3.29	3.24	3.48
Year	-.07	-.08	-.13
Endogeneity Control	.22†	.22†	.20
Direct Effect			
Lone-Insider Board		3.54*	.73
Interaction Effects			
Board Type * Blockholders			20.11***
Board Type * Board Size			-.89
R^2	.011	.013†	.026***
ΔR^2		.002	.013

N = 2,329. † p<0.1, * p<.05, ** p<.01, *** p<.001

The relationship between lone-insider boards and R&D intensity was described in Hypotheses 6a, 6b, and 6c, and tested using fixed effects models. Results are reported in Table 8. Hypothesis 6a predicts that lone-insider boards negatively influence R&D intensity. The coefficient is negative (b = -.04; $p < .02$). Therefore, Hypothesis 6a is supported. Hypothesis 6b introduces blockholders as a moderator between lone-insider boards and R&D intensity. It was predicted that in the presence of blockholders, R&D intensity among lone-insider boards would be higher, and that R&D intensity would be lower among lone-insider boards when blockholders are not present. The blockholder interaction term is not significant (b = -.04; $p > .19$). Thus, Hypothesis 6b is not supported. Lastly, board size was introduced as a moderator in Hypothesis 6c. Specifically, it was predicted that the effect on R&D intensity among smaller lone-insider boards will be positive, and that the effect on R&D intensity among larger lone-insider boards

will be negative. However, the board size interaction was not significant (b = .01; p > .13). Therefore, Hypothesis 6c is not supported.

Table 8: Regression Results for R&D Intensity.

	Model 1	Model 2	Model 3
Constant	-14.12	-15.51	-14.77
Controls			
Blockholders	.00	.00	.00
Board Size	.01	.01	.01
CEO Tenure	-.00	.00	-.00
Director Shares	-.00	.00	.00
CEO Shares	.00	.00	.00
Return on Assets	.00***	.00***	.00***
Shareholder Returns	-.00*	.00*	-.00*
Firm Size	-.11***	-.11***	-.11***
Year	.01	.01	.01
Endogeneity Control	-.06	-.06	-.06
Direct Effect			
Lone-Insider Board		-.04*	-.03†
Interaction Effects			
Board Type * Blockholders			-.04
Board Type * Board Size			.01
R^2	.063***	.069***	.072***
ΔR^2		.006	.003

N = 1,148. † p<0.1, * p<.05, ** p<.01, *** p<.001

The final set of Hypotheses tested, Hypotheses 7a and 7b, were tested with fixed effects models. Results are reported in Table 9. Hypothesis 7a predicts a positive relationship between lone-insider boards and product diversification such that product diversification is higher in the presence of lone-insider boards. The lone-insider board coefficient is not significant (b = -.00; p > .42). Thus, Hypothesis 7a is not supported. Hypothesis 7b introduces board size as a moderator in the relationship between lone-insider boards and product diversification. It was hypothesized that among larger lone-insider boards, product diversification is higher, but that among smaller

lone-insider boards, product diversification is lower. The interaction was not significant ($b = .00$; $p > .47$). Thus, Hypothesis 7b is also not supported.

Table 9: Regression Results for Product Diversification.

	Model 1	Model 2	Model 3
Constant	-22.73**	-22.83**	-22.60**
Controls			
Blockholders	.02	.02	.02
Board Size	.00	.00	.00
CEO Tenure	-.00	-.00	-.00
Director Shares	.00	.00	.00
CEO Shares	.00	.00	.00
Return on Assets	.00	.00	.00
Shareholder Returns	-.00	-.00	-.00
Firm Size	.01	.01	.01
Year	.01**	.01**	.01**
Endogeneity Control	-.17	-.17	-.17
Direct Effect			
Lone-Insider Board		-.00	.00
Interaction Effects			
Board Type * Board Size			.00
R^2	.035	.035	.035
ΔR^2		.000	.000

N = 1,148. † p<0.1, * p<.05, ** p<.01, *** p<.001

Table 10 reports a summary of the hypothesis results. Tables 11, 12, and 13 report the results classified by main effect, the lone-insider board by blockholder interaction, and the lone-insider board by board size interaction, respectively. The evidence suggests support for three of the seven main effects hypotheses. When lone-insider boards exist, duality is more common, CEO incentive compensation is higher, and R&D intensity is lower compared to firms with other board types. Four of the main effect hypotheses were not supported, two of which were significant but in the opposite direction from the hypothesis. Specifically, when lone-insider boards exist, total CEO cash compensation is lower and the compensation differential between

the CEO and the next highest paid top management team member is lower. CEO incentive compensation was the only one of the six blockholder interaction hypotheses to receive support; of the other five hypotheses, three were statistically significant but in the opposite direction from the hypotheses (duality, CEO total cash compensation, and compensation differential). Finally, three of the seven board size interaction hypotheses were supported (duality, total CEO cash compensation, and compensation differential).

Table 10: Overall Results of Hypothesis Testing.

Hypothesis	Hypothesized Direction	Result
H1a: Lone-Insider Board – Duality	+	Confirmed (Weak)
H1b: Lone-Insider Board – Duality, Blockholder Interaction	-	Disconfirmed
H1c: Lone-Insider Board – Duality, Board Size Interaction	+	Confirmed (Weak)
H2a: Lone-Insider Board – Anti-Takeover Measures	+	Not Confirmed
H2b: Lone-Insider Board – Anti-Takeover Measures, Blockholder Interaction	-	Not Confirmed
H2c: Lone-Insider Board – Anti-Takeover Measures, Board Size Interaction	+	Not Confirmed
H3a: Lone-Insider Board – CEO Total Cash Compensation	+	Disconfirmed
H3b: Lone-Insider Board – CEO Total Cash Compensation, Blockholder Interaction	-	Disconfirmed
H3c: Lone-Insider Board – CEO Total Cash Compensation, Board Size Interaction	+	Confirmed
H4a: Lone-Insider Board – Compensation Differential	+	Disconfirmed
H4b: Lone-Insider Board – Compensation Differential, Blockholder Interaction	-	Disconfirmed
H4c: Lone-Insider Board – Compensation Differential, Board Size Interaction	+	Confirmed
H5a: Lone-Insider Board – CEO Incentive Compensation	+	Confirmed
H5b: Lone-Insider Board – CEO Incentive Compensation, Blockholder Interaction	+	Confirmed
H5c: Lone-Insider Board – CEO Incentive Compensation, Board Size Interaction	-	Not Confirmed
H6a: Lone-Insider Board – R&D Intensity	-	Confirmed
H6b: Lone-Insider Board – R&D Intensity, Blockholder Interaction	+	Not Confirmed
H6c: Lone-Insider Board – R&D Intensity, Board Size Interaction	-	Not Confirmed
H7a: Lone-Insider Board – Product Diversification	+	Not Confirmed
H7b: Lone-Insider Board – Product Diversification, Board Size Interaction	+	Not Confirmed

Table 11: Results of Hypothesis Testing: Main Effects.

Hypothesis	Hypothesized Direction	Result
H1a: Lone-Insider Board – Duality	+	Confirmed (Weak)
H2a: Lone-Insider Board – Anti-Takeover Measures	+	Not Confirmed
H3a: Lone-Insider Board – CEO Total Cash Compensation	+	Disconfirmed
H4a: Lone-Insider Board – Compensation Differential	+	Disconfirmed
H5a: Lone-Insider Board – CEO Incentive Compensation	+	Confirmed
H6a: Lone-Insider Board – R&D Intensity	-	Confirmed
H7a: Lone-Insider Board – Product Diversification	+	Not Confirmed

Table 12: Results of Hypothesis Testing: Lone-Insider Board X Blockholder Interaction.

Hypothesis	Hypothesized Direction	Result
H1b: Lone-Insider Board – Duality, Blockholder Interaction	-	Disconfirmed
H2b: Lone-Insider Board – Anti-Takeover Measures, Blockholder Interaction	-	Not Confirmed
H3b: Lone-Insider Board – CEO Total Cash Compensation, Blockholder Interaction	-	Disconfirmed
H4b: Lone-Insider Board – Compensation Differential, Blockholder Interaction	-	Disconfirmed
H5b: Lone-Insider Board – CEO Incentive Compensation, Blockholder Interaction	+	Confirmed
H6b: Lone-Insider Board – R&D Intensity, Blockholder Interaction	+	Not Confirmed

Table 13: Results of Hypothesis Testing: Lone-Insider Board X Board Size Interaction.

Hypothesis	Hypothesized Direction	Result
H1c: Lone-Insider Board – Duality, Board Size Interaction	+	Confirmed (Weak)
H2c: Lone-Insider Board – Anti-Takeover Measures, Board Size Interaction	+	Not Confirmed
H3c: Lone-Insider Board – CEO Total Cash Compensation, Board Size Interaction	+	Confirmed
H4c: Lone-Insider Board – Compensation Differential, Board Size Interaction	+	Confirmed
H5c: Lone-Insider Board – CEO Incentive Compensation, Board Size Interaction	-	Not Confirmed
H6c: Lone-Insider Board – R&D Intensity, Board Size Interaction	-	Not Confirmed
H7b: Lone-Insider Board – Product Diversification, Board Size Interaction	+	Not Confirmed

CHAPTER 6
DISCUSSION

This chapter reviews the study results from Chapter 5 and discusses the implications for theory and practice. When taken together, the overall study results show important and interesting patterns that add to our understanding of how boards function. Throughout the discussion, directions for future research are offered. Later, study limitations are presented, followed by concluding thoughts.

Discussion of Results

The purpose of this study was to test whether there are differences between firms with lone-insider boards and firms with other board structures on various outcomes. These outcomes were broadly classified into corporate governance, executive compensation, and firm strategy. This section first discusses the results, starting with the main effects, followed by the impact of blockholders, and concluding with the impact of board size. Then, overall implications are discussed based on the study results.

Main Effects

One area where the study's findings are consistent with agency theory's predictions and the aspirations of board reformers is in the context of executive compensation. Agency theory suggests that a majority of outside board members is an effective governance mechanism because more outside board members have an incentive to maintain a reputation as capable independent monitors (Fama & Jensen, 1983). Lone-insider boards represent the extreme of outside board representation. Counter to expectations, the study found that lone-insider CEO total cash compensation is lower than in other board types. This finding suggests that outside directors on lone-insider boards are heeding the calls for executive compensation reform and are constraining total CEO compensation. This finding should bolster the claims of advocates who suggest more outside representation is an effective method to control CEO compensation.

Also, the compensation differential is narrower in lone-insider boards compared to other board structures. Although I expected lone-insider CEOs to exploit their status and advocate for their own compensation to the detriment of their fellow top management team members, the opposite occurs. The compensation differential between the CEO and next highest paid member of the top management team is narrower in lone-insider board structures than in other board

structures. This result suggests lone-insider boards are not only effective at keeping total CEO cash compensation in check, they are also effective at fairly compensating other top management team members. If a wide compensation differential occurs, it could cause lower morale and lead to turnover (Bloom, 1999; Cowherd & Levine, 1992; Martin, 1982; Pfeffer & Langton, 1993). Instead, the small differential suggests that perhaps other top management team members perceive compensation practices as fair and thus turnover is being held in check. Future research might benefit from examining if top management turnover is indeed lower in firms with lone-insider boards. If turnover is lower, it is possible that critical, firm-specific knowledge is retained. Kogut and Zander (1992) argue that knowledge is held by individuals rather than firms. When turnover is high, critical knowledge can be lost. But, if turnover is low, access to these valuable stores of knowledge should be retained. Therefore, lower turnover implies that a greater collection of knowledge is retained in the firm. Knowledge retention, in turn, could lead to increased firm performance.

Lone-insider boards are also fulfilling their responsibilities by paying higher levels of incentive compensation compared to other boards. One of the board's responsibilities is to incentivize CEOs (Eisenhardt, 1989; Jensen & Meckling, 1976), and incentive compensation should align CEOs' interests with shareholders' interests. Incentive pay is an important financial control. Thus, the study results with respect to executive compensation are consistent with prior theoretical development asserting that boards with greater proportions of outsiders emphasize financial controls (Baysinger & Hoskisson, 1990).

The overall theoretical implication of the executive compensation findings is that lone-insider CEOs are not able to use their information asymmetry advantage over the board to argue for higher total compensation, fixed in lieu of incentive compensation, or to earn higher compensation differentials. Therefore, lone-insider boards are more effective than other boards at fulfilling their responsibilities with respect to executive compensation. Because this study revealed differences in incentive compensation between lone-insider boards and other board types, future research might benefit from studying the consequences of pay structures among lone-insider boards. For example, Sanders (2001) studied the relationship between incentive pay and CEO risk taking. He found CEOs are more likely to take extreme risks when compensated with stock options and less likely to take such risks when compensated with stock ownership. It might be that lone-insider CEO risk profiles differ from CEOs of other board types because of

their greater incentive pay, especially if the increased incentives arrive in the form of stock options. If differences exist, lone-insider boards will need to adjust their monitoring practices to accommodate these differences in risk preferences. Further, shareholders will need to consider whether or not increased incentive compensation and its form (stock options versus stock grants) motivates CEOs to take appropriate risks.

Whereas lone-insider boards are fulfilling their responsibilities in the domain of executive compensation, they are less impressive in the areas of duality and R&D. First, lone-insider boards are more likely to grant duality. Gaining duality is one method CEOs can use to increase their job or financial security (Finkelstein & Hambrick, 1996). This is because duality CEOs are able to set board agendas (Alderfer, 1986), which makes it more difficult for other board members to challenge the CEO (Williams & Shapiro, 1979). This finding has important implications for agency theory. Agency theory suggests that a majority of outside board members is an effective governance mechanism (Fama & Jensen, 1983). A majority of outside board members should keep CEO influence in check. However, lone-insider boards award duality more often than other board types. Future research should examine the impact of lone-insider duality CEOs on outcomes such as executive succession and firm performance. Are lone-insider duality CEOs more likely to entrench themselves compared to non-duality lone-insider CEOs? If so, the evidence will suggest lone-insider duality CEOs are using their power to remain in office. Because of the lag structure I used in this study, I was unable to examine whether performance differences exist between firms with lone-insider duality versus non-duality CEOs. However, a matched pair study between bankrupt and non-bankrupt firms showed bankrupt firms are more likely to have duality CEOs (Daily & Dalton, 1994). Perhaps similar performance differences extend to lone-insider boards.

Second, there is a negative relationship between lone-insider board structures and R&D intensity. This result is consistent with Baysinger and Hoskisson's (1990) proposition that majority-outsider boards are more likely to emphasize financial controls over strategic controls, and that insider representation is positively associated with R&D expenditures (Baysinger et al., 1991). R&D is a long-term risky investment with high failure rates (Mansfield, 1968). Thus, reducing R&D investment boosts short-term accounting measures of performance (Hill & Snell, 1989).

The results of this study suggest that lone-insider CEOs are able to use their information asymmetry advantage to reduce R&D investments. One reason lone-insider CEOs might reduce R&D investments is because their incentive pay is higher. When boards emphasize outcome-based results by increasing CEO incentive pay, lone-insider CEOs are less likely to invest in long-term, risky R&D projects (Hoskisson, Hitt, & Hill, 1993). Thus, lone-insider CEOs might reduce R&D investments, to lower total expenses and temporarily increase accounting returns. Accordingly, lone-insider CEOs might also prefer acquisitions over R&D as a way to gain access to new and related technologies. A benefit of acquisitions is that they increase firm size, which is positively linked with increases in CEO compensation (Kroll, Wright, Toombs, & Leavell, 1997).

There was no support for the hypothesis that anti-takeover measures are higher in lone-insider board structures. The relationship was non-significant, perhaps because lone-insider CEOs face competing forces when deciding whether to implement anti-takeover measures. On one hand, CEOs want anti-takeover measures because acquisitions decrease job security (Martin & McConnell, 1991). However, anti-takeover measures might not be higher among lone-insider boards because CEOs can benefit from attractive tender offers; they can sell their stock at a premium. Therefore, CEOs might not want to decrease anti-takeover measures. Although caution is warranted when interpreting null results, it seems likely that the non-significant result reflects CEOs attempts to balance the competing forces of short-term financial gain and long-term employment security. Future research should explore the possibility that a moderator influences the lone-insider board to anti-takeover measures relationship. For example, environmental uncertainty could be a moderator. If environmental uncertainty is high, CEOs might prefer employment security over financial gain because they feel threatened by the unpredictable nature of events in the environment. This would result in more anti-takeover measures. If environmental uncertainty is low, CEOs might prefer financial security over employment gain because they think they have more control over events in the environment. This would result in fewer anti-takeover measures.

I also found no evidence that product diversification is higher among lone-insider structures. I expected to find a positive relationship because product diversification is one method to increase pay and decrease employment risk. Although earlier studies found that managers are more likely to pursue diversification beyond the point that is beneficial to

shareholders (Hill & Snell, 1988), especially when monitoring is weak (Amihud & Lev, 1981), there is some debate about the efficacy of this relationship. Lane et al. (1998) used improved measures and found that managers do not diversify more, even when monitoring is low. Thus, the lack of a statistical relationship between lone-insider boards and product diversification is not surprising.

<u>Blockholders</u>

The results indicate that blockholders interact with lone-insider boards to impact total CEO cash compensation, but in the opposite direction than hypothesized. Specifically, total CEO cash compensation is higher when blockholders are present in lone-insider boards. Also contrary to expectations, compensation differentials increase in lone-insider boards when blockholders are present. The relationship between lone-insider boards and CEO incentive compensation is stronger when blockholders are present. Blockholders are working with lone-insider boards to encourage contingent-based compensation. Combined, the results of the three lone-insider by blockholder hypotheses suggest that blockholders are not as interested in monitoring total CEO cash compensation or compensation differentials, but they are intent on emphasizing incentive compensation in order to align CEOs' and shareholders' interests. The results of the main effect and interaction hypotheses show that lone-insider boards and blockholders are working in concert to emphasize incentive compensation, perhaps because they have been conditioned to emphasize outcome-based pay.

Counter to expectations, blockholders interact with lone-insider boards such that CEO duality is more likely. Perhaps blockholders are not concerned about CEO duality in lone-insider boards. Blockholders might think that the board is independent enough to counteract any CEO power plays. Thus, blockholders do not interfere with lone-insider board deliberations about duality. Or, it could be that blockholders think duality is acceptable in some situations, such as when there are challenges to organizational legitimacy. In such cases, organizational members and the external community need to clearly understand who is in charge (Finkelstein & D'Aveni, 1994). Given this finding, it is important to contrast differences in firm performance between firms with lone-insider duality versus non-duality CEOs when blockholders are present. If firm performance is worse when blockholders encourage duality on lone-insider boards than when they encourage non-duality, blockholders will need to reconsider the wisdom of awarding duality to lone-insiders.

I found a main effect showing a negative relationship between lone-insider boards and R&D intensity, but blockholders have no impact on the lone-insider board to R&D intensity relationship. Although null results need to be interpreted with caution, the lack of an interaction is suggestive that blockholders avoid the types of strategic controls that are necessary to monitor R&D. One reason might be that as large shareholders they, like the highly incentivized CEO, are interested solely in short-term firm performance outcomes. Thus, they focus solely on CEO incentive pay because they believe doing so is the quickest path to firm performance. Alternatively, perhaps some blockholders actively emphasize strategic controls but their effects are canceled out by others who do not. Ryan and Schneider (2002) contrast institutional shareholders, such as pension funds, which are longer-term focused and active, with others, such as mutual funds, which are comparatively passive. Future research on lone-insider boards should seek to understand if there are differences in outcomes depending on whether firms have active versus passive blockholders. If the results show that active blockholders are more likely to emphasize strategic controls than passive blockholders, we will better understand the situations in which blockholders provide a balancing effect to outside directors. Alternatively, passive blockholders might exacerbate the effects of outside directors.

Blockholders also have no effect on the lone-insider board to product diversification relationship. Because there was no finding for the main effect, the lack of evidence for the blockholder interaction is not surprising. Lone-insider boards do not influence product diversification, and blockholders do not seem to change the relationship. Given that there is debate surrounding the extent to which managers want to diversify for personal gain, perhaps this non-finding should not come as a surprise (Lane et al., 1998).

Board Size

The results indicate that any benefits of lone-insider boards are generally nullified as they become larger, at least from an agency theory point of view. As lone-insider boards get larger, they are more likely to yield control to CEOs by awarding duality. In the domain of executive compensation, larger lone-insider boards award CEOs with higher total cash compensation and larger compensation differentials. Thus, it appears that CEOs in large lone-insider boards are able to convince their boards of just about everything – more power and more total cash compensation that results in higher compensation differentials. From an agency theory perspective, it appears that larger boards nullify many benefits of lone-insider boards because

CEOs are able to gain power and increase their compensation. Thus, boards need to carefully consider the costs of adding board members. Future inquiry might benefit by examining the interaction of lone-insider boards and board size more carefully. Specifically, at what point do boards become too large to effectively control CEO power and compensation? Previous research has suggested boards be limited to no more than eight (Jensen, 1993) or ten (Lipton & Lorsch, 1992) members, but we do not know if this result holds for lone-insider boards.

However, there was no support for the hypotheses that larger lone-insider boards negatively influence incentive compensation or R&D investment, or that they positively influence product diversification. The main effect findings already suggest that lone-insider CEOs receive higher incentive pay, and lower R&D intensity. Thus, perhaps lone-insider CEO's are already getting their way, so the additional freedom offered by a large board does not change these relationships. With respect to product diversification, previous research has failed to conclusively demonstrate that managers diversify for personal gain (Lane et al., 1998). Therefore, not finding a significant relationship between large lone-insider boards and product diversification is not surprising.

Implications for Research

Taken as a whole, the study results paint a mixed picture. The initial premise of this study was that there are limits to board independence. In lone-insider boards, it was expected that CEOs exploit their information asymmetry advantage and thus limit the board's monitoring effectiveness, making it more likely they will give in to CEO self-interest (Holmstrom, 1979). Further, mutual monitoring was expected to be limited because there are no other inside board members to report CEO behavior to the board. This study instead found lone-insider boards effectively govern with respect to financial controls, but at the expense of strategic controls. Financial controls lead to lower total CEO cash compensation and compensation differentials, and higher CEO incentive compensation. However, strategic controls do not appear to be emphasized in lone-insider boards. As a result, duality is more common and R&D intensity is lower.

Further, blockholders and larger boards appear to weaken financial controls. Total CEO cash compensation and compensation differentials are higher (although incentive pay increases), and lone-insider duality is more common when blockholders are present. This is counter to theoretical and practical expectations, and is an important avenue for future inquiry. We need to

understand why blockholder effectiveness is attenuated in lone-insider boards. Also, when lone-insider boards are larger, the effects are mostly detrimental from a financial control perspective. Total CEO cash compensation and compensation differentials are higher and duality is more common.

As Lorsch and MacIver (1989) point out, outside board members are busy with their primary jobs and know substantially less about the firm compared to CEOs. Lone-insider boards exacerbate the CEO's information asymmetry advantage because no other insiders serve on the board. This study is consistent with prior theoretical development suggesting that boards dominated by outsiders rely on financial controls instead of strategic controls (Baysinger & Hoskisson, 1990).

The study results suggest the need to re-examine the role inside directors play in corporate governance, especially regarding strategic controls. Because outside directors do not have a full understanding of the business, they cannot be fully effective monitors (Patton & Baker, 1987). Therefore, more inside directors are needed to relay complex strategic information to outside directors. If insider directors are able to help outside directors understand organizational complexities, outside directors should be able to fulfill their oversight responsibilities more effectively. More effective oversight will go beyond the basic tracking of financial controls and include more sophisticated evaluations of CEO proposals and decision-making effectiveness. Overall, this could mean that boards will not grant duality as often and will place more emphasis on long-term strategic issues such as R&D investment.

Not only can the addition of inside directors help boards detect self-interested CEO motives, inside directors can protect CEOs from unnecessary board actions when appropriate. If boards rely primarily on financial controls, detrimental effects can result. This is because firm-level outcomes cannot always be attributed to leadership (Eisenhardt, 1985). Stated differently, "poor outcomes can occur despite good efforts" (Eisenhardt, 1985: 136). Insiders have a more complex understanding of the firm and will be able to help outside board members sort through the effects of CEO decisions. In conclusion, from an agency theory perspective the evidence suggests boards should be small and include some insiders. As Baysinger and Hoskisson (1990: 77) suggest, "Including insiders on the board appears to represent an attempt to overcome problems with information processing and, hence, to improve the effectiveness of decision control."

My assertion that boards should be small and have at least two spots reserved for insiders is potentially at odds with the resource dependence perspective, which suggests outside board members benefit firms by virtue of their ability to provide access to external resources, increase firm legitimacy in the external environment, and offer advice and counsel (Hillman & Dalziel, 2003). For example, outside board members can help the firm gain access to important resources because of the relationships they have established in the business community (Pfeffer & Salancik, 1978). Providing access to resources helps reduce transaction costs (Williamson, 1984), and outside board members' business expertise helps with strategy formulation, which in turn improves firm performance (Eisenhardt & Schoonhoven, 1996; Geletkanycz & Hambrick, 1997). Although the results of this study indicate increased board size is detrimental from a monitoring perspective, it might be that larger lone-insider boards more than compensate for their apparent monitoring difficulties by accessing critical firm resources. Following the call by Hillman and Dalziel (2003), future research needs to jointly consider agency theory and resource dependence implications. My findings suggest small boards with two (or a few insiders) is an effective monitoring structure. However, resource dependence suggests substantial expertise is needed; thus larger boards are better.

Perhaps some boards are willing to substitute monitoring effectiveness gained in smaller boards for access to resources provided by larger lone-insider boards. A contingency approach would be useful to study this apparent conflict between theories. One contingency, for example, might be highly-regulated environments, such as the utilities or banking industries. Are more outsiders needed in highly regulated environments? Pfeffer and Salancik (1978) suggest boards form coalitions of political support in order to influence favorable regulation. In addition to different views about board size, resource dependence might suggest that using board seats for insiders reduces the board's external reach. My research suggests insiders are important for monitoring. Thus, another question is: Under what conditions do the marginal gains from adding a second insider overcome the costs in terms of either using a seat that otherwise might help access external resources or expanding the board to accommodate the insider? Although this is an empirical question, my results imply that at least one other insider is vital and their value outweighs their costs at any board size.

Study Limitations

      This study suffers from several limitations. These limitations include missing data, the study methodology, the sampling timeframe, and the U.S.-centric nature of this study. First, this study suffers from substantial amounts of missing data. There were 3,980 firm-year observations for this sample frame. However, listwise deletion and the use of fixed effects models (where firms are dropped if conditions do not change during sample years) resulted in only 593 firm-year observations for the duality hypotheses, and 1,148 firm-year observations for the R&D intensity and product diversification hypotheses. This issue can cause selection bias. Selection bias occurs when there is a difference between respondents and non-respondents in the sample; it can bias estimates of population parameters (Schwab, 2005). In Chapter 4, I noted that there are differences in the number of lone-insider boards between firms with missing versus complete data. One reason might be that high-technology firms' boards are different; these firms report R&D investment more often. Therefore, among the dropped observations, I compared cases with R&D intensity to cases without R&D intensity and found that a difference exists. Dropped firms that report R&D are more likely to have lone-insider boards. The difference actually suggests that the R&D intensity results are conservative. Because high-technology firms are more likely to report R&D spending and are more likely to use lone-insider structures, it implies that R&D and lone-insider structures will be positively related. Thus, finding a negative relationship, as I did here, is more difficult than it might have been in an unbiased sample. Overall, it suggests CEOs of research-intensive firms that depend on R&D for long-term survival take advantage of their lone-insider status by reducing R&D investment.

      A second limitation is that this study utilized archival data. This approach is a limitation because it is does not allow direct access to the decision-making processes that led to the relationships observed. A finer-grained understanding of why differences exist between lone-insider boards and other boards could be better understood through interviews with CEOs, blockholders, and board members. However, considering the size of this sample, the tradeoff between archival and interview methods is reasonable.

      Third, the sampling timeframe was from 1997-2001. In 2002, the U.S. Congress passed the Sarbanes-Oxley Act, which is a major piece of legislation aimed at corporate governance reforms. Among the directives is that a majority of the board be comprised of unaffiliated outside directors. Since 2002, there is a trend toward more lone-insider boards. Specifically, the number

of lone-insider firms from among the S&P 500, S&P MidCaps, and S&P SmallCaps has increased from 286 in 2003 to 354 in 2005 (RiskMetrics, 2007). Sampling from this latter timeframe would be useful to determine if the findings from this study hold in a different timeframe. Unfortunately, blockholder data was not available beyond 2001 from the electronic data sources accessible at the time of this study.

Finally, this was a U.S.-centric study. Strategic management research has received criticism in the past for a lack of international research (e.g., Bettis, 1991). Corporate governance is an area of study in other countries (i.e., Conyon & Peck, 1998). Thus, sampling firms from other countries would be helpful to determine if the evidence suggests the results of this study are generalizable to organizational settings outside the U.S.

Conclusion

The major objective of this dissertation was to answer the research question, "Do boards with lone-insider structures differ from other board structures in terms of organizational outcomes?" The answer is yes. More specifically, this study examined whether lone-insider boards influence strategic management outcomes in the areas of corporate governance, executive compensation, and firm strategy, and also how blockholders and board size interact with lone-insider boards to influence these areas. The results indicate that lone-insider boards are more effective from a financial control rather than strategic control perspective. Specifically, lone-insider boards emphasize outcome-based pay, but give CEOs more power and allow lower R&D intensity. Blockholders and large boards appear harmful in lone-insider structures by increasing total pay and compensation differentials, and offering duality more often.

These results have important implications for research and practice. Since Berle and Means (1932) discussed the separation of ownership from control over 75 years ago, researchers and practitioners have tried to gain a better understanding of the proper mechanisms to mitigate the negative effects that result from the divergence in principals' and agents' interests. For most of this time period, board-focused research has ignored the impacts of lone-insider boards and instead focused on boards from other perspectives, such as the proportion of insiders to outsiders. This study took a more fine-grained approach and looked at a specific contingency, the lone-insider structure.

As a result of this study, practitioners can act on evidence that financial controls are stronger in lone-insider boards, but strategic controls may suffer. This indicates that a second

insider can benefit boards by allowing for stronger strategic controls through mutual monitoring. Government regulators may view the small lone-insider structure as a model of governance, but they will need to also consider the longer-term strategic impacts of information asymmetry and a lack of mutual monitoring. This study has contributed to the corporate governance literature by highlighting some advantages and exposing some limits of board independence at its extreme. My hope is that the results of this study will act as a catalyst to spur further research on lone-insider boards and strategic management outcomes for several years.

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BIOGRAPHICAL SKETCH

John Martin was born and raised in the Pacific Northwest. Prior to earning his doctorate, his work experience included sales, project management, and university-level instruction. He also has earned a Bachelor of Science in Business Administration and a Master of Business Administration. John's primary research area is corporate governance, specifically boards of directors and executive compensation.